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THE TONICS—Quinine and Strychnine;

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IT DIFFERS IN ITS EFFECTS FROM ALL ANALOGOUS PREPARATIONS; and it possesses the important properties of being pleasant to the taste, easily borne by the stomach, and harmless under prolonged use.

IT HAS GAINED A WIDE REPUTATION, particularly in the treatment of Pulmonary Tuberculosis, Chronic Bronchitis, and other affections of the respiratory organs. It has also been employed with much success in various nervous and debilitating diseases.

ITS CURATIVE POWER is largely attributable to its Stimulant, Tonic, and Nutritive properties, by means of which the energy of the system is recruited.

ITS ACTION IS PROMPT; it stimulates the appetite and the digestion, it promotes assimilation, and it enters directly into the circulation with the food products.

The prescribed dose produces a feeling of buoyancy, and removes depression and melancholy; HENCE THE PREPARATION IS OF GREAT VALUE IN THE TREATMENT OF MENTAL AND NERVOUS AFFECTIONS. From the fact, also, that it exerts a double tonic influence, and induces a healthy flow of the secretions, its use is indicated in a wide range of diseases.

NOTICE—CAUTION—The success of Fellows' Syrup of Hypophosphites has tempted certain persons to offer imitations of it for sale. Mr. Fellows, who has examined samples of several of these, finds that no two of them are identical, and that all of them differ from the original in composition, in freedom from acid reaction, in susceptibility to the effects of oxygen when exposed to light or heat, in the property of retaining the strychnine in solution, and in the medicinal effects.

As these cheap and inefficient substitutes are frequently dispensed, instead of the genuine preparation, physicians are earnestly requested when prescribing the Syrup, to write "Syr. Hypophos. FELLOWS."

As a further precaution, it is advisable that the Syrup should be ordered in the original bottles (4/- or 7/-); the distinguishing marks which the bottles (and the wrappers surrounding them) bear, can then be examined, and the genuineness—or otherwise—of the contents thereby proved.

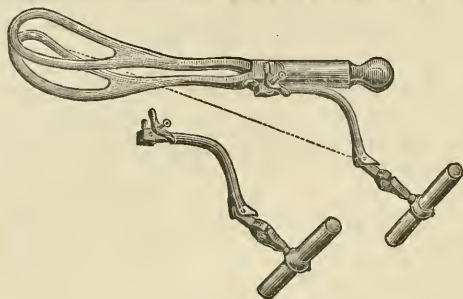
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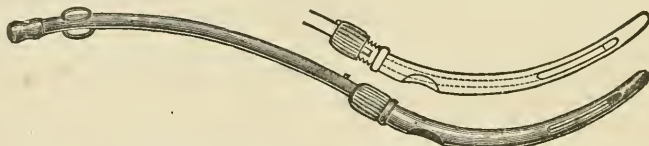


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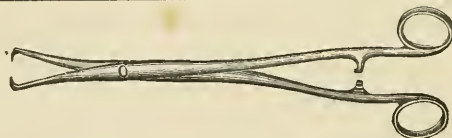
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## BOZEMAN'S UTERINE DOUCHE.

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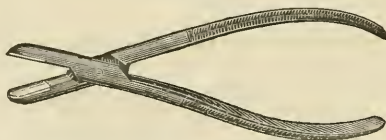
Price 7s. 6d.



## UTERINE VULSELLUM FORCEPS.

As used at the Rotunda Hospital, Dublin.

Price 7s. 6d.



## NEEDLE-HOLDING FORCEPS.

As used at the Rotunda Hospital.

Price 7s. 6d.

All these Instruments are made entirely of metal, to enable them to be boiled and antiseptised.

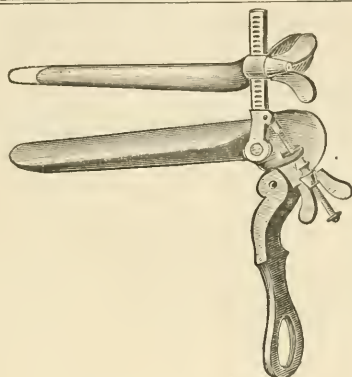
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## VAGINAL SPECULUM.

As used at the Rotunda Hospital, Dublin.

Price 20s.



## DOUCHING CURETTE.

As used at the Rotunda Hospital, Dublin.

Price 9s.

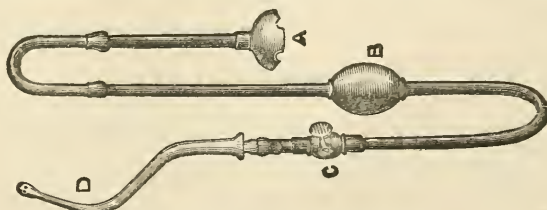


## UTERINE CANULA (for Cervical Medication).

As used at the Rotunda Hospital, Dublin.

Price 8s. 6d.

All these Instruments are made entirely of metal, to enable them to be boiled and antiseptised.



## UTERINE DOUCHE.

As used at the Rotunda Hospital, Dublin.

Price 7s. 6d.

FEMALE GLASS CATHETER, 4d.

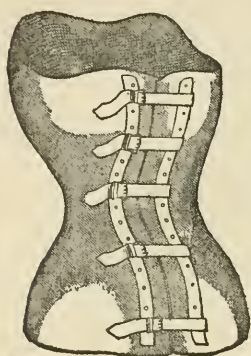
GLASS UTERINE DOUCHE TUBE, 4d.

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# Cocking's Adaptable Poroplastic Jackets and Splints.



## Instructions for Measurement, &c.

### **JACKET** (*in cases of slight deformity*).

Circumference at axilla.

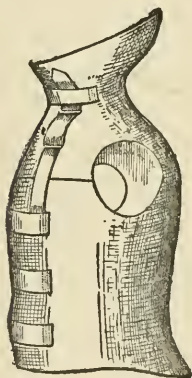
" waist.

" hips.

Length from axilla to great trochanter.

In severe angular cases circumference over apex of curve, position of same, and contour should be given ; in lateral cases a description of the case.

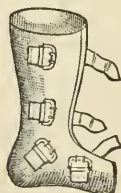
In all cases it should be stated if for male or female.



### **CERVICAL JACKET.**

Same measurements required, and circumference at neck, and length from neck to axilla.

Any part of the Jacket can in the process of Manufacture be left Soft.



### **CLUB FOOT.**

Circumference below knee.

" ankle.

" heel and instep.

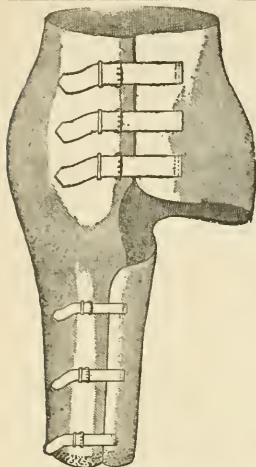
Length from below knee to ground.

" of foot.

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# Cocking's Adaptable Poroplastic Jackets and Splints.



## Instructions for Measurement, &c.

### HIP SPLINT.

Circumference at waist.

" hips.

" thigh, top of

" above knee.

Length from waist to groin.

State if for right or left side.



### LEG SPLINT.

Circumference at top of thigh.

" above knee.

" at knee.

" below knee.

" calf.

" ankle.

Length from groin to centre of knee.

" centre of knee to ankle.

State if for right or left leg.

When the foot-part is required, also circumference of heel and instep, and length from centre of knee to ground.

If the limb is contracted the contour should be given.

*Splints are also made in Poroplastic for fracture of Inferior Maxilla, Humerus, Elbow-Joint, Forearm, Thigh, Knee-Joint, Leg, Shoulder-Joint, Hand, &c.*

*These Splints can be fitted perfectly to the Patient if softened either by hot water or in a Heater made for the purpose. When mounted with webbing, hot water will do; if with leather, a Heater should be used. The material becomes quite hard again in two or three minutes.*

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*Extract from "The British Medical Journal," Sept. 26, 1891.*

#### SOLUBLE PEARL-COATED PILLS.

PEARL-COATED PILLS are very elegant in appearance and are readily taken by patients. The objection to their use is that sometimes the coating is so hard that the pills pass through the intestinal canal unchanged. Mr. Stephen Wand, of Leicester, has sent for examination specimens of some of his soluble pearl-coated pills. We find that when they are placed in water at a temperature of 100° F. and kept perfectly still, in the course of an hour the coating has become cracked and the water coloured, thus showing that the contents have become dissolved. If during the experiment the pills are shaken, the disintegration can be effected in a much shorter time. The addition of a little dilute hydrochloric acid greatly facilitates the operation. From these results it may be concluded that the pearl-coated pills sent by Mr. Stephen Wand would, under the conditions existing in the stomach, rapidly become broken up and their contents dissolved.

*Extract from "CHEMIST & DRUGGIST," August 8th, 1891.*

COATED PILLS.—We have received from Mr. Wand, of Leicester, samples of his soluble pearl-coated pills. They are very nicely made and finished, the coating being even, bright, and hard, yet we find that in cold water only the coating disintegrates in a very short time, and the mass underneath is also rapidly affected by the fluid. We take it from our experiments that the pills are perfectly soluble in the alimentary canal, and as far as we are able to judge the masses are made with excellent materials. The Bland's pill, for instance, shows no signs of oxidation. Mr. Wand has nearly 1,300 formulæ, and offers ten-gross lots of the more popular pills at very low prices.

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| 3 Pil. Aloes et Ferri, P.B. |  | Per gross      |         |                                     |            |
| 17 Pil. Rhei Co., P.B.      |  |                | 5½d.    |                                     |            |
|                             |  |                | 5½d.    |                                     |            |
| <b>ANTIBILIOUS.</b>         |  |                |         |                                     |            |
| 194 Podophyllin.            |  | gr. ss.        |         |                                     |            |
| Ext. Coloc. Co.             |  | " 1j.          |         |                                     |            |
| " Hyosey.                   |  | " i.           | 1s. Id. |                                     |            |
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| Aloes Soc.                  |  | " 1-3rd.       |         |                                     |            |
| Canella                     |  | " 2-3rds.      |         |                                     |            |
| Ol. Pulegii                 |  | " 1-3rd.       |         |                                     |            |
| Terebinth                   |  | q.s.           | 5d.     |                                     |            |
|                             |  |                |         | <b>TONIC.</b>                       | Per gross  |
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|                             |  |                |         | " Gum. Ammon. aa. gr. iss.          |            |
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Claims to be a Specific for all Congestive and Inflammatory Conditions of the Respiratory Apparatus, and will be found efficacious in

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None genuine except such as bears the above Trade Mark “**SPIRONE**” and the Signature of the Inventor upon the Bottle on the Label over the Cork, and on the Wrapper.

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“In the cases of Bronchitis in which I have used it the results have been very satisfactory and distinctly curative.”

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“I have been using the ‘*Spirone*’ for rather over three months for a

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# PERIODICALS WITH WHICH THE DUBLIN JOURNAL OF MEDICAL SCIENCE IS EXCHANGED.

## GREAT BRITAIN.

1. The Edinburgh Medical Journal. Oliver and Boyd.
2. The Retrospect of Medicine. Edited by James Braithwaite. Simpkin, Marshall, and Co.
3. Pharmaceutical Journal. Churchill.
4. The Lancet.
5. The British Medical Journal.
6. The Journal of Mental Science. London: Churchill.
7. The Glasgow Medical Journal. A. MacDougall.
8. The Medical Press and Circular.
9. The Westminster Review. Trübner.
10. Transactions of Obstetrical Society. London: Longmans.
11. The Practitioner; a Monthly Journal of Therapeutics. Macmillan and Co.
12. The Journal of Anatomy and Physiology. Macmillan.
13. Brain. London: Macmillan & Co.
14. The Bristol Medico-Chirurgical Journal.
15. The London Medical Recorder. London: W. H. Allen & Co.
16. The Provincial Medical Journal.

## CANADA.

17. The Montreal Medical and Surgical Journal. Richard White. Box 386, P.O., Montreal.

## AMERICA.

18. The American Journal of the Medical Sciences. Edited by Isaac Hayes, M.D. Philadelphia: Henry C. Lea. London: Trübner and Co.
19. The Medical Record. New York: William Wood & Co.
20. Medical News. Philadelphia: Henry C. Lea's Son and Co.
21. The American Journal of Science and Arts. Conducted by Professors B. Silliman, and J. D. Dana, &c. New Haven: Editors.
22. The American Journal of Insanity, Utica, N. Y. State Lunatic Asylum.
23. The American Journal of Obstetrics and Diseases of Women and Children. New York: William Wood and Company. London: S. Low, Son, and Marston.
24. The New York Medical Journal. New York and London: D. Appleton & Co.
25. The Medical and Surgical Reporter. Philadelphia: N. A. Randolph, M.D., and Charles W. Dulles, M.D.
26. Journal of Cutaneous and Venereal Diseases. New York: Wm. Wood and Co.

## AMERICA.—continued.

27. The Times and Register. New York and Philadelphia.
28. Chicago Journal of Nervous and Mental Disease.
29. The St. Louis Medical and Surgical Journal. St. Louis: Geo. O. Rumbold and Co.
30. Journal of the American Medical Association. Chicago, Illinois.
31. Index Medicus. George S. Davis. Detroit, Michigan.
32. The Occidental Medical Times. James H. Parkinson, Editor, Sacramento, California.

## FRANCE.

33. Répertoire de Pharmacie, Archives de Pharmacie, et Journal de Chimie Médicale réunis. Troisième Série. Paris: M. C. Crinon.
34. Gazette Médicale de Paris. Paris: 4, Place Saint-Michel.
35. Journal de Pharmacie et de Chimie &c. Paris: Victor Masson.
36. L'Union Médicale. Paris: Bureau, Rue de la Grange-Batelière.
37. Archives Générales de Médecine. Paris: Asselin.
38. Bulletin de l'Académie de Médecine. Paris: G. Masson.
39. Revue de Thérapeutique Médico-Chirurgicale. Paris: Masson.
40. Annales Médico-Psychologiques. Par MM. Baillarger, Cerise, et Lunire. Paris: V. Masson.
41. Bulletin Général de Thérapeutique Médicale et Chirurgicale. Par le Docteur Félix Bricheateau. Paris.
42. Répertoire de Pharmacie. Par M. Eug. Lebaigue. Paris: Rue de la Perle, 11.
43. Annales de Gynécologie. Paris: H. Lauwereyns.
44. Gazette des Hôpitaux. Paris: 4, Rue de l'Odéon.
45. Lyon Médical, Organe Officiel de la Société Impériale de Médecine. Lyon: Mégret.
46. Revue des Sciences Médicales en France et à l'étranger. Paris: G. Masson.
47. Gazette Hebdomadaire. Paris: 91, Rue de Lille.
48. Revue de Médecine et Revue de Chirurgie.
49. Revue de Laryngologie, d'Otologie, et de Rhinologie. Paris: Octave Doin.
50. Annales des Maladies des Organes Génito-Urinaires. Paris: 22, Place St. Georges.

## *List of Exchange Journals.*

### BELGIUM.

51. Bulletin de l'Académie Royale de Médecine de Belgique. Bruxelles: F. Hayez.  
52. Annales d'Oculistique. Bruxelles.

### GERMANY.

53. Archiv für Gynækologie. Redigirt von Credé und Spiegelberg. Berlin: August Hirschwald.  
54. Centralblatt für die medicinischen Wissenschaften. Berlin: August Hirschwald.  
55. Jahrbuch für Kinderheilkunde und physische Erziehung. Leipzig: B. G. Teubner.  
56. Archiv für pathologische Anatomie und Physiologie, &c. Herausgegeben von R. Virchow. Berlin: G. Reimer.  
57. Berliner klinische Wochenschrift. Berlin: Hirschwald.  
58. Archiv für klinische Chirurgie. Herausgegeben von Dr. B. von Langenbeck. Berlin: Hirschwald.  
59. Archiv für Psychiatrie und Nervenkrankheiten. Berlin: August Hirschwald.  
60. Zeitschrift für physiologische Chemie. Herausgegeben von F. Hoppe-Seyler. Strassburg: Karl J. Trübner.  
61. Deutsche Medizinal-Zeitung. Herausgegeben von Dr. Julius Grosser. Berlin: Eugen Grosser.  
62. Albrecht von Graefe's Archiv für Ophthalmologie. Göttingen: Professor Dr. Th. Leber.  
63. Centralblatt für klinische Medizin, und Centralblatt für Gynækologie. Berlin: Hirschwald.

### NORWAY.

64. Norsk Magazin for Lægevidenskaben. Udgivet af det medicinske Selskab i Christiania. Christiania: Paa Th. Steen, Forlag.

### SWEDEN.

65. Hygiea, medicinsk och farmaceutisk Maonads-skrift. Stockholm: P. A. Norstedt och Söners förlag.  
66. Nordiskt medicinskt Arkiv. Redigeradt af Dr. Axel Key, Prof. i Patolog. Anat. i Stockholm. Stockholm: Samson och Wallin.  
67. Upsala Läkareförenings Förhandlingar. Upsala: Ed. Berling.

### DENMARK.

68. Hospitals-Tidende. Optegnelser af praktisk Lægekunst fra Ind- og Udlandet. Kjöbenhavn: Jacob Lund. London: Asher and Co.  
69. Bibliothek for Læger. Kjöbenhavn: C. A. Reitzels Forlag.  
70. Ugeskrift for Læger. Kjöbenhavn: C. A. Reitzels Forlag.

### ITALY.

71. Lo Sperimentale, Giornale Critico di Medicina e Chirurgia per servire ai Bisogni dell' Arte Salutare. Direttore Prof. C. C. M. Butalini. 35, Via Alfani, Florence.

### AUSTRALASIA.

72. The Australasian Medical Gazette. Sydney: L. Bruck.

# BOOKS, PAMPHLETS, AND PERIODICALS RECEIVED—JAN., 1892.

1. A. B. C. of the Swedish System of Educational Gymnastics. By Hartvig Nissen. Philadelphia and London: F. A. Davis. 1891. 8vo. Pp. 107.
2. Handbook of Materia Medica, Pharmacy, and Therapeutics. By Sam'l O. L. Potter, A.M., M.D. (Jeff'n), M.R.C.P. (Lond.). Third Edition. Philadelphia: P. Blakiston, Son, & Co. 1891. 8vo. Pp. 767.
3. A Manual of Operative Surgery. By Frederick Treves, F.R.C.S. London: Cassell & Co. 1891. Medium 8vo. Two volumes. Pp. 775 and 775.
4. The Brooklyn Medical Journal. Vol. 5. No. 11. November, 1891.
5. Bulletin of the Johns Hopkins Hospital. Volume II. No. 17. Baltimore. October, 1891.
6. Annales de la Policlinique de Bordeaux. No. 7. Octobre, 1891. Bordeaux: Feret et Fils.
7. The Dundee Advertiser. November 23 and 24, 1891.
8. On the Influence of one Fever on another. By H. Noble Joynt, M.A., M.D. Reprint. Pp. 5.
9. A History of Medical Education from the most remote to the most recent Times. By Dr. Theodor Puschmann. Translated and edited by Evan H. Hare, M.A. Oxon. London: H. K. Lewis. 1891. 8vo. Pp. 650.
10. Ichthyol. By T. Cranstoun Charles, M.D. Reprint. Pp. 12. 1891.
11. Nouvelles Observations concernant l'action thérapeutique de l'Ichthyol. Par A. Stocquart. Tamines. 1891. Pp. 8.
12. Die Behandlung des Erysipels. Von Dr. Stanislaus Klein. Berlin. 1891. Pp. 12.
13. World Wide Missions. Vol. IV. No. 4. November, 1891.
14. Inherited Consumption and its Remedial Management. By William Dale, M.D. Lond. London: H. K. Lewis. 1891. Pp. 37.
15. Refraction of the Eye. By A. Stanford Morton, M.B., F.R.C.S. Eng. Fourth Edition. London: H. K. Lewis. 1891. Pp. 71.
16. The Harveian Oration. By W. Howship Dickinson, M.D., F.R.C.P. London: Longmans, Green, & Co. 1891. 8vo. Pp. 34.
17. The Action of Glycerine on the Brain. By James Johnstone. Edinburgh: John Lindsay. 1891. Pp. 16.
18. The Anatomical and Histological Dissection of the Human Ear. By Dr. Adam Politzer. Translated from the German by George Stone. London: Baillière, Tindall, & Cox. 1892. 8vo. Pp. 272.
19. Psycho-therapeutics. By C. Lloyd Tuckey, M.D. Third Edition. London: Baillière, Tindall, & Cox. 1891. 8vo. Pp. 321.
20. The Newsagent and Booksellers' Review. Vol. V. No. 22. November 23, 1891.
21. Revista de Ciencias Médicas de Barcelona. Año XVIII. Número 22, 1891.
22. The Pharmaceutical Journal of Australasia. Vol. IV. No. 10. October, 1891.
23. Bulletins et Mémoires de la Société de Chirurgie de Paris. Tome XVII. No. 9. Octobre, 1891. Paris: G. Masson.
24. Statement of Mortality in the Principal Cities of Canada for the Month of October, 1891.
25. The National Bulletin. Nos. 56, 57. December, 1891.
26. On the Simulation of Hysteria by Organic Disease of the Nervous System. By Thomas Buzzard, M.D. Lond. London: J. & A. Churchill. 1891. 8vo. Pp. 113.
27. Age of the Domestic Animals. By Rush Shippen Huidekoper, M.D. Philadelphia and London: F. A. Davis. 1891. 8vo. Pp. 217.

*Books, Pamphlets, and Periodicals received—(continued).*

28. The Pathological Histology of Bronchial Affections, Pneumonia, and Fibroid Pneumonia. By A. G. Auld, M.D. London: J. & A. Churchill. 1891. 8vo. Pp. 207.

29. The Medical Bulletin. Vol. XIII. No. 11. November, 1891.

30. The Pathology and Prevention of Influenza. By Julius Althaus, M.D., M.R.C.P. Lond. London: Longmans & Co. 1892. Pp. 64.

31. L'Ittiolo nella terapia dei morbi utero-ovarici. Del Dr. Albertoletti. Seduta del 12 guigno, 1891. Reprint. Pp. 12.

32. Beitrag zur Freund'schen Ichthyolbehandlung der Frauenkrankheiten. Von Dr. Edgar Kurz. Leipzig: Georg Thieme. 1891. Pp. 7.

33. Zur Ichthyolbehandlung in der Frauenheilkunde. Von P. J. Köttschau. 1891. Reprint. Pp. 10.

34. Johns Hopkins University Circulars. Vol. XI. No. 93. Baltimore. November, 1891.

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# THE DUBLIN JOURNAL

OF

## MEDICAL SCIENCE.

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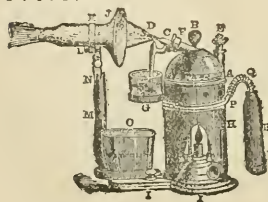
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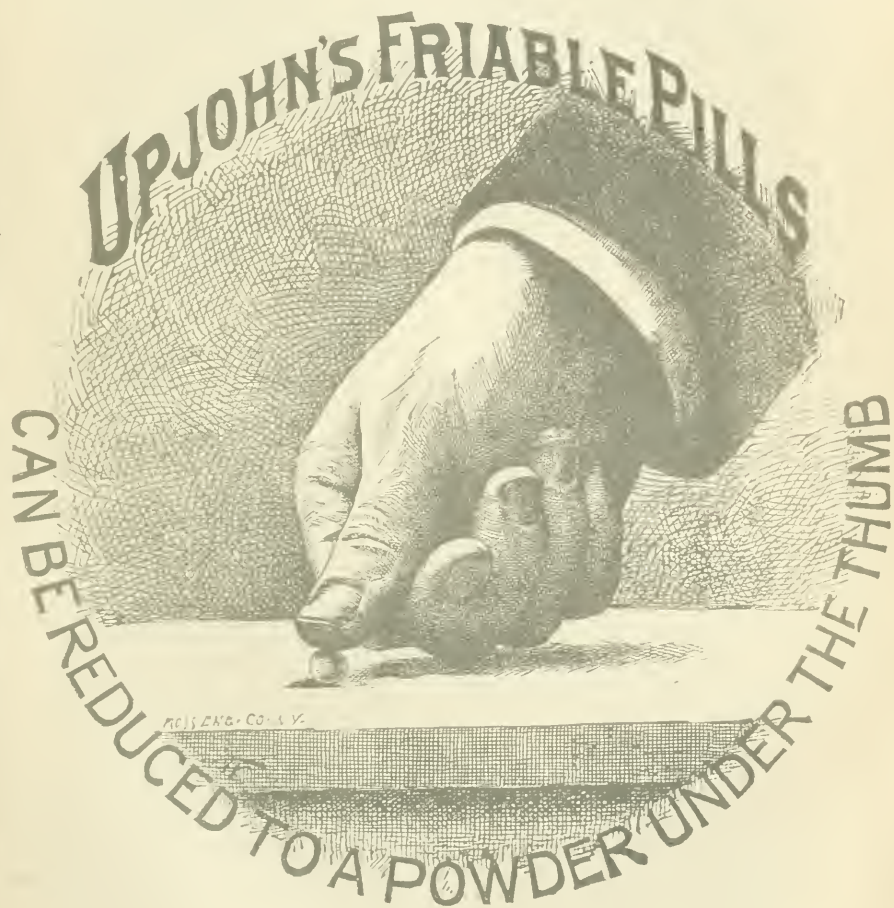
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# THE DUBLIN JOURNAL

OF

## MEDICAL SCIENCE.

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JANUARY 1, 1892.

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### PART I.

### ORIGINAL COMMUNICATIONS.

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ART. I.—*Recent Advances in the Ætiology of Diseases of the Skin, and their Bearing upon Treatment.*<sup>a</sup> By WALTER G. SMITH, M.D., Physician to Sir Patrick Dun's Hospital; King's Professor of Materia Medica, School of Physic, Trin. Coll. Dubl.

IN the present paper I propose to collect and summarise the results of some recent investigations. I shall endeavour to show the light which these doctrines and inquiries have thrown, and are calculated still more in the future to shed upon the group of diseases of the skin.

No attempt at a complete survey will be made, nor would, indeed, be possible in the time, and a restricted field—that of cutaneous diseases—is purposely chosen, for the sake of illustration, although it will be obvious that the facts to be referred to have a much wider scope.

For example, it will be remembered that last session in the Section of Pathology Dr. Bewley read an instructive paper upon the Pathology of Empyema, in which he showed that empyema is always due to the entrance of pus-producing organisms into the pleural cavity, either directly from without, or through a diseased lung, or by the route of the blood and lymph-vessels.

Results such as these have been acquired by the patient labours of experts in modern microscopical research. While only the

<sup>a</sup> Read in the Section of Medicine of the Royal Academy of Medicine in Ireland Nov. 20th, 1891.

minority can be fellow-workers in this attractive field, the rich harvest which is being garnered can and ought to be eagerly seized upon by all practitioners who desire to keep pace with the rapid strides of knowledge.

It is scarcely necessary to add that I do not at all wish to convey that dermatology is becoming a mere sub-section of bacteriology. Rather does the skin afford an epitome of general and special pathology; and the attempts to unravel its problems have been fruitful in elucidating pathological questions.

I shall allude more particularly to instances wherein our pathological conceptions have been simplified, and our views cleared, and hope to show that treatment has been rendered more rational and more successful.

If we glance at any of the current text-books upon Diseases of the Skin, we find a chapter or chapters devoted to the Vegetable Parasitic Diseases of the Skin. The affections usually described under this heading are some five or six in number.

Arranged in order of the discovery of their exciting cause, we start from the important discovery made in 1839 by Schönlein, who was the first to recognise and accurately describe the fungous character of the elements constituting a favus crust. To this succeeded the discovery by Gruby and Malmsten in 1843 of the fungus of ring-worm, and that of tinea versicolor by Eichstedt in 1846.

Notwithstanding the length of time these organisms have been known, and in spite of numerous investigations, their exact botanical affinities and mutual relationships have not yet been satisfactorily determined.

Even in the case of favus, whose clinical characters are so sharply defined, observers are not agreed as to whether we should acknowledge one only or several distinct forms of fungus.<sup>a</sup>

Many other problems await solution, some of them of old standing—viz., whether alopecia areata is a parasitic disease or not.

What a revolution is taking place in dermatology may be inferred from the fact that eleven years ago Kaposi, adverting to Hallier's mycological teaching, states that some of the investigations carried out in the direction indicated by him were so frivolous and resulted in such monstrosities that they excited the greatest mistrust of Hallier's results. "For," he scornfully adds, "there

<sup>a</sup> Cf. Pick und Král. Untersuchungen über den Favus. Monatsh. f. prakt. Dermat. XIII., p. 52.



was no single disease, whether warts, eczema, psoriasis, pruritus cutaneus, or inflammation, erysipelas, &c., which would not be attributed to a fungus" (Hebra, "Diseases of the Skin," New Sydenham Soc., Vol. V., p. 129).

Who, it may well be asked, would now deny that erysipelas and suppurative inflammations are due to parasitic organisms, to say nothing of the disputable ground presented by warts,<sup>a</sup> eczema, and psoriasis.

When we consider the exposed position, the extent of surface, and the innumerable creases, folds, and crevices in the human epidermis, it is little matter for surprise that it has been found to be the home of a great variety of micro-organisms. Thus, Unna, in an investigation of sixty pure cultures from a series of cases of seborrhœic eczema, discovered no less than fifty different *Mucors*, twenty different kinds of *Penicillium*, five *Aspergilli*, about a dozen forms belonging to the groups *Oidium* and *Saccharomyces*, besides a goodly number of partly known, partly unknown, cocci and bacilli.

Král succeeded in growing three pure cultures of mould fungi from "eczema marginatum," all of which possessed the common property of flourishing luxuriantly at the body temperature, while at the temperature of the room they grew but slowly and imperfectly (*Monatsh. f. prakt. Derm.*, 1890, p. 185).

In truth, there is an extensive *Flora Dermatologica* which vegetates upon the epidermis of man. The beginnings of our knowledge of it have been laid by Unna and his assistants, who have studied the appearances, macroscopic and microscopic, of these organisms, and their characters after cultivation in various media (*Monatsh. f. prakt. Dermat.*, 1888, VII., p. 817, *et seq.*).

Many of these fungi are harmless, some are merely saprophytic, and a few are real mischief-makers (*cf.* Die Färbung der Mikroorganismen im Horngewebe. Unna. *Monatsh. f. prakt. Derm.* XIII., p. 325).

As a matter of convenience, I have distributed the illustrations which I shall adduce under separate propositions:—

I. Some maladies hitherto ascribed to vague and unknown causes of internal origin are really traceable to infection, usually from without.

I shall upon this occasion dismiss with a nominal mention the case of lupus, whose specificity is generally acknowledged, and that of certain forms of purpura, which have been shown to be

<sup>a</sup> Cf. Kuhnemann. Monatshefte f. prakt. Dermatol. VIII., IX.

due to a fibrino-bacterial thrombosis (Tizzoni: Giovannini. de Guinard. *Monatsh. f. prakt. Derm.* X., p. 473; XI., p. 74).

Let us dwell shortly upon the examples of (a) erysipelas; (b) impetigo; (c) boils and carbuncles.

As to erysipelas, it may be regarded as proven that it is strictly caused by the intrusion of a streptococcus into the lymphatic channels of the skin or mucous membrane, and it is worth remarking that the contagious character of erysipelas was known in England long before it was recognised in Germany.

Erysipelas and lymphangitis are not convertible terms.

In connection with erysipelas, we are reminded of the interesting and important topic of the antagonism of micro-organisms, for erysipelas and vaccinia are examples of infective diseases, the artificial production of which has been suggested and used as a means of cure for other diseases—*i.e.*, lupus, and certain forms of tumour (Fehleisen, *Micro-parasites in Disease. Selected Essays*, New Syd. Soc., p. 272; and Watson Cheyne, *Lectures on Suppuration*, p. 83).

Now, erysipelas often starts from a source of suppuration, and may itself be complicated by or end in suppuration, and, again, suppurative affections of the skin of primary and secondary origin are phenomena familiar to us in every-day practice.

It is generally held as settled that *acute* suppuration is, as Ogston first showed, due to the action of micro-organisms;<sup>a</sup> but it is a difficult matter to determine whether erysipelas is an entity, a truly specific disease, or whether it does not represent a phase or mode of action of the pus-producing organisms. Watson Cheyne is inclined to uphold the specific character of the erysipelas germ, while Levy in a valuable paper (*Archiv. f. exper. Path. u. Pharm.* XXIX. Ueber die Mikro-organismen der Eiterung, p. 135), teaches that streptococcus pyogenes is at once an exciter of suppurative processes and of erysipelas. It is more than probable that there are several species of erysipelas due to different bacteria.

However this may be, it is a distinct advance in our knowledge to grasp the fact that the affections known as impetigo, boils, and carbuncles are invariably produced only under the influence of micro-organisms.<sup>b</sup> We are thereby enabled to get clearer views of

<sup>a</sup> Karlinski gives interesting statistics, based upon 200 cases of purulent inflammation, of the different forms of cocci and bacilli concerned—(*Monatsh. f. prakt. Derm.* X., p. 420).

<sup>b</sup> Cf. Bockhardt's classical paper—Ueber die Ätiologie u. die Therapie der Impetigo, des Furunkels, u. der Sykosis—(*Monatsh. f. prakt. Derm.*, 1887, p. 450).

their clinical history and progress, and our treatment is rendered less haphazard and more scientific.

The clinical differences in these affections can be explained by such considerations as these. Pus probably varies in virulence according to its origin, and pathogenic micro-organisms certainly vary in virulence according to the external conditions in which they find themselves. In a word, the character of the mischief done—*i.e.*, the type of the disease—depends not alone upon its direct cause, but also largely upon the mode of entrance and the seat of development of the organisms (Bockhardt: Garré).

Levy (*loc. cit.*) adduces evidence to show that the *Bacterium coli commune* may induce all possible forms of inflammation—*viz.*, simple suppuration, inflammation of serous membranes, lymphangitis, and general blood-poisoning.

We are becoming more and more impressed with the conception, one of great importance, that the purely morphological study of bacteria is not the safe guide it was supposed to be in the dawn of bacteriology. A far more weighty point is the degree of virulence, coupled with investigations as to the conditions under which its virulence can be respectively augmented or attenuated.

We can easily see why pustular eruptions are common on the heads of children infected with pediculi. The reason is that pyogenic organisms often lurk beneath the nails or exist attached to hairs, and hence are readily inoculated by scratching into the little wounds inflicted by the pediculi.

It is an old observation, and one which Mr. Hutchinson has emphasised in his teaching (*i.e.*, his aphoristic definition of *Impetigo contagiosa*—*viz.*, “common, contagious, curable”), that pus is contagious; but, it should be remembered that pus, apart from the organisms which it contains, does not exert a pyogenic action (Cheyne). So that, strictly speaking, “*impetigo contagiosa*” does not represent a specific entity, because all forms of impetigo are, from their pathogenesis, contagious.

Considering the very great frequency of wounds and breaches of surface, it may appear strange that inflammatory and suppurative diseases are not more commonly met with. To this it may be replied that pyogenic organisms are not so abundant in the air as might be supposed, they are rarely present in putrefying fluids, and, moreover, they act only under certain special conditions. We are, besides, led by experience to conclude that susceptibility to the action of pyogenic organisms is, in many individuals, but slight.

Virulence is probably altered by many slight and unexpected causes.

Is the dictum then true—"No bacteria, no pus"?

This is partly a verbal question, and turns upon our idea of what constitutes "true creamy pus" (Cheyne). Watson Cheyne leans to the doctrine of the essential connection between pus and bacteria ("Suppuration and Septic Diseases," 1889, p. 29); while Burdon Sanderson considers it proved that suppuration can be induced without the aid of microphytes (Croonian Lectures, *Brit. Med. Journ.*, Nov. 14, 1891, p. 1,033). V. Sehlen's observations in Unna's laboratory confirm this latter view (*Monatsh. f. prakt. Derm.*, XI., p. 327).

If organisms which are usually pyogenic—viz., *Staphylococcus pyogenes*, may in certain cases be purely phlogogenous (Levy, *loc. cit.*, p. 162)—why refuse to admit that non-microbic irritants may, under certain circumstances, excite suppurative inflammation? Can we determine when suppuration commences, and what test have we to decide when inflammatory exudation passes into purulent exudation? What is the "critical point" of suppuration?

Conversely it may fairly be asked, Does the presence of pyogenic organisms in an inflammatory effusion necessarily indicate that the effusion will become purulent? Levy (*Archiv. f. exp. Path. u. Pharm.* XXVII.) has shown that the presence of *Staphylococcus pyogenes* in a pleural effusion does not prove that it will become purulent.

At any rate, everyone admits that acute suppuration can be most surely brought about by micro-organisms.

Let us now for a moment stop to inquire in what ways these organisms gain access to the skin.

1. From without, through the epidermis. This is by far the most frequent mode. A wound or breach of surface offers an open door of entrance, but they may also enter through the uninjured epidermis, penetrating into the sweat ducts, hair follicles, and sebaceous gland openings. If the epidermis were an absolutely continuous horny sheet, devoid of glandular orifices, and remained uninjured, then we should undoubtedly less often see a pustule or boil on the skin. Yet it must be admitted that pus cocci may penetrate into the lymph-channels of the skin through the intact epidermis (Garré). Bockhardt's and Garré's disinterested experiments upon their own bodies are conclusive as to the pathogeny of whitlow, carbuncle, and boils—viz., that they are local



infective diseases. The well-known predilection of furuncles for certain localities—*e.g.*, neck, loins, and axilla—is explained by the closely-applied parts of the dress favouring a thorough inunction of infective germs present over these parts, the result of this inunction being rendered correspondingly certain by the presence of the sweat (Garre, “Microparasites in Disease.” Selected Essays, New Syd. Soc., 1886). If the micrococci invade only the epidermis we have a superficial pustule—*i.e.* (a) impetigo<sup>a</sup>; if the intruders find their way deeper down the hair-follicles and gland-ducts, we have a more violent inflammation, with or without necrosis—*i.e.* (b) a boil, phlegmon, or suppurative folliculitis, and a congeries of furuncular points form (c) a carbuncle, which bears to a boil somewhat the same relation as that of a Peyer’s patch to a solitary gland.

Ecthyma is scarcely worth retaining in nomenclature, for it is merely an aggravated form of impetigo, occurring chiefly on the lower limbs and on an unhealthy soil—*e.g.*, alcoholic or syphilitic.

2. The infection may occur from within outwards—*i.e.*, from the blood. This is true of only a small minority of cases. But it probably explains the occurrence of certain examples of mammary abscess, some of the instances of abscesses, boils, and other forms of local inflammation which are apt to occur, for example, in the wake of severe cases of continued fevers, epidemic influenza, &c. Pyogenic cocci have been found in the blood of patients suffering from various acute diseases, and by no means necessarily give rise to local troubles, for the production of which other concurrent factors are usually required. In eight cases of pyæmia and puerperal fever, and of which four died, Levy succeeded four times in demonstrating *Staphylococcus albus* in the blood of the living patients (Ueber die Mikro-organismen der Eiterung. *Archiv.f. exp. Path. u. Pharm.*, XXIX., 136).

II. What have been commonly described as different forms or varieties of disease are often really due to the co-operation of different causes.

Let me give one or two illustrations. *Acne*—Here we have two processes:—

(a) The closure of the follicle and the formation of a comedo.

(b) Suppuration within the follicle.

This arises either from the presence of micrococci which had been bottled up inside the plugged follicle or by subsequent

<sup>a</sup> Hence, impetigo is not a mere stage or phase of eczema.

infection. Hence, the two chief indications for local treatment are:—

- (i.) To loosen and remove the horny plugs.
- (ii.) To kill the micrococci which induce suppuration.

*Scabies.*—The eruption in this disease is described as consisting of papules, vesicles, and pustules. The pustules are really due to accidental secondary infection with pus cocci.

*Syphilis.*—Are pustular eruptions in a syphilitic patient the direct outcome of the syphilitic virus? Most of them are surely due to a “mixed infection;” and Leloir has since 1886 been in the habit of describing them in his clinique as purulent para-syphilitic complications.

*Eczema.*—The composite group of affections which we term eczema is being gradually disentangled.<sup>a</sup> I can now mention only two points. First, the occurrence of post-eczematous boils, which sometimes occur as a complication or sequela. They are rare in connection with other diseases of the skin. We explain these boils and abscesses by inoculation of the skin with pus-germs, the pre-existing eczema furnishing a suitable soil. Secondly, the eczema impetiginosum (not to be confounded with primary impetigo contagiosa), common on the face of children, is not, as some authors maintain, a variety of eczema. It is really a hybrid condition—*i.e.*, an eczema upon which an impetigo has been grafted, by inoculation with staphylococcus. Hence, as we see, the disease is far more frequent on uncovered than on covered parts, because it is propagated by scratching. In the course of appropriate treatment, further, it is comparatively easy to stop the suppuration—*i.e.*, cure the impetigo—but we then still find ourselves face to face with a chronic eczema, with its notorious resistance to treatment (Dubreuilh. *Annal. de Derm. et de Syphl.*, 1890).

*Lupus and Scrofuloderma.*—Although the latter term is scarcely susceptible of exact definition, it is convenient to retain it for the group of affections characterised by these marks—*viz.*, indolent, dusky inflammation of the skin, readily undergoing suppuration, the tissue so spongy that it can be scraped away with the greatest facility, and leaving a thin white scar.

Such a condition of things is often conjoined with ordinary

<sup>a</sup> For example, the term “eczema marginatum” embraces several distinct affections—*viz.* (a) erythrasma; (b) tinea circinata; (c) tinea versicolor; (d) pityriasis circinata (Vidal); (e) eczema, seborrhoicum; (f) forms of lichen circumscriptus (Vidal, Brocq.).—(*Monatsh. f. prakt. Derm.* XIII., p. 102.)

nodular lupus. In what relation to each other are we to view lupus and scrofuloderma? A plausible theory has been advanced by Unna, and Leistikow, who has examined the question bacteriologically, adopts the theory which, briefly, is this, that scrofuloderma is an affection caused by the symbiosis of *Staphylococcus pyogenes aureus* and *Bacillus tuberculosis*. Or, in other words, scrofuloderma represents a case of "mixed infection" by the tubercle bacillus and by the ordinary exciters of pus.<sup>a</sup>

According to the predominance of one or other of these disturbers of nutrition, will the tissues exhibit a tubercular or a suppurative tendency.

? The tubercle virus thrives best in organs which are readily prone to hyperæmia. The skin, which in most situations is anæmic, does not offer a very suitable soil for the bacillus. It fixes itself generally on parts which are normally hyperæmic—viz., cheeks, nose, and ears. Around a spreading lupus we always find a zone of capillary congestion.

Should the tubercle bacillus fail to meet with a persistent hyperæmia in its neighbourhood, then its deleterious action may be arrested, and it becomes encapsuled in a dry, caseous mass. Hence the extraordinary chronicity and the intermittent progress of the lupous disease. Pus cocci, on the contrary, always induce active hyperæmia and extravasation, wherever they penetrate into normal skin-tissue. But if the pus cocci arrive as secondary elements upon a tuberculised soil, they find there a badly nourished tissue, a soil unsuited for their development, and which does not allow them to produce acute phlegmonous inflammation. Instead, therefore, we get a gummy gelatinous softening of the tissue, a degeneration midway between the dry caseation of tubercle and purulent softening. Such a tissue would be more easily and more completely removed by "scraping," and so, as clinical experience confirms, be less liable to relapse (Ueber Skrofuloderma; Dr. L. Leistikow.—*Monatsh. f. prakt. Derm.* XI., p. 438).

Leloir holds views identical with these.

III. Classification of diseases of the skin is rendered more accurate.

One example will suffice—viz., sycosis. This term was for a long

<sup>a</sup> Similarly, the gonococcus alone is unable to give rise to a suppurating bubo. When a suppurating bubo occurs as a complication of acute gonorrhœa it is always due to a "mixed infection" with pyogenic cocci, which are found in the pus from the bubo. The bubonic pus does not contain gonococcus.

time, and is still, far too often used loosely in a merely topographical sense—i.e., for any obstinate pustular affection involving the hairy parts of the face.

The next step in advance was the distribution of the cases into two groups—viz., parasitic sycosis (tinea sycosis), and non-parasitic sycosis (“ordinary sycosis”!!) This subdivision is maintained in our most recent text-books, notwithstanding Bockhardt’s conclusive observations were published in 1887.<sup>a</sup>

From the date of Bockhardt’s paper we must deny the existence of a non-parasitic sycosis, and, in the present state of knowledge, the cases fall into three groups:—

- (a) Coccogenous sycosis; due to staphylococcus, the so-called non-parasitic sycosis of authors.
- (b) Hyphogenous sycosis; due to trichophyton, the so-called parasitic sycosis (ringworm of the beard) of authors. Exists as (i) superficial (ii) deep form.
- (c) Bacillogenous sycosis; due to a bacillus named *Bacillus sycosiferus fœtidus* (Tommasoli. *Monatsh. f. prakt. Derm.* VIII., p. 483).

(Cf. *Ueber ulerythema sycosiforme*. Dr. Sack.—*Monatsh. f. prakt. Derm.* XIII., 133, and *Disseminierte, parasitäre Perifolliculitis*, *Ebenda*. XIII., 319).

IV. Since dermatology is at present in an active transitional state, the exposition of skin-diseases in text-books will have to be largely re-cast. Much greater attention must in future be paid to ætiology.

V. We can better see the reasons for much of our management of skin affections, and we recognise more clearly the importance of prophylactic measures.

*Ringworm*.—Everyone knows the ease with which ringworm can be cured on the smooth parts of the body, or those only provided with lanugo, and its obstinate resistance to treatment when situated on the scalp. Scharff’s observations (*Monatsh. f. prakt. Derm.* X., 536), account for this. The human epidermis (horny layer) is a poor soil for the growth of trichophyton, which, in its turn, gives rise to only slight disturbances of nutrition in the skin, but even moderate inflammatory reaction is prejudicial to the life of the fungus, which consequently perishes, or is easily cured by parasiticide and irritant applications. Scharff found mycelium very scantily present, and only in the deeper layers of the horny

<sup>a</sup> *Loc. cit.*

stratum and in the lower part of the hair follicle; none in the prickly layer.

Upon the head, on the contrary, the fungus flourishes luxuriantly, and produces, as a rule, little inflammatory reaction. The artificially produced irritation and inflammation, so often used in the treatment of ringworm of the scalp, finds then its prototype and its justification in the moderate reaction which occurs upon the smooth parts of the skin.

(*Cf.* An interesting series of bacteriological experiments upon the relative value of certain drugs in the treatment of favus and ringworm, by Dr. Schwenger.—*Monatsh. f. prakt. Derm.* XI., 155.)

*Erysipelas*.—Accepting the parasitic nature of erysipelas as an undeniable fact, the position of those who, from clinical observation, have rejected the use of nitrate of silver and other local astringents in its treatment is amply justified. It is, I think, not more rational than the so-called abortive treatment of small-pox eruption; and, similarly, I must express my disbelief in the utility of the much-vaunted chalybeates internally.

*Boils (Carbuncle) and Impetigo*.—While the treatment of the superficial form of pustular dermatitis is often as satisfactory as it is simple, it is quite otherwise with the deeper grade of inflammation typified by a common boil. They are sometimes half welcomed—nay, if possible, encouraged by the laity under the lingering superstition that they afford an outlet for the evil spirits that torment the body, but ere long the patient will be ready to say:—

“Die ich rief, die Geister  
Werd’ich nun nicht los.”

(Quoted by Garré.)

Now that the cause of boils is known to be parasitic infection, it will follow that, in the great majority of cases, they own an external origin, and the theory, still so dear to the minds of many, that they are entirely due to some vague constitutional cause (“impurity of the blood!”) has received its quietus.

The indications for successful treatment fall naturally under four heads:—

1. To destroy by parasiticides the intruding cocci before they have induced necrosis of tissue.

2. When necrosis has occurred, to hasten as much as possible the expulsion of the necrotic plugs with their contained cocci.

3. To guard against the development of new boils through infection by means of cocci spreading from the older boils.



4. To place the organism in such a position as to render it as resistant as possible to invasion by micrococci.

As Veiel well points out (*Ueber die Therapie der Furunkulose. Monatsh. f. prakt. Derm.*, XI., 362), the first indication can seldom be fulfilled. For once the cocci have penetrated far enough to lead to visible swelling and formation of papule or vesicle, necrosis has, as a rule, begun, and the glandular ducts are clogged by exudation plugs, so that the external application of antiseptics frequently becomes futile. Abortion of a furuncle can sometimes be attained by first thoroughly cleansing the part and then applying Unna's carbolic-mercury plaster, or by injection with a 3 per cent. phenol solution.

For the second indication no method can, I think, approach in rapidity of cure the plan of thoroughly scooping out the necrotic core. Severe cases of pustular acne can be quickly and certainly cured only by following the same lines—*i.e.*, curetting or incising each pustule and carefully disinfecting its interior. This is very painful, and usually demands an anæsthetic, but its results cannot be equalled. It is both rational and successful. Where this method is not available for boils, then, with Veiel, I believe in the old-fashioned poultice, which, at will, may be prepared with a  $\frac{1}{1000}$  solution of sublimate or a 4 per cent. solution of boric acid. At night the boil may be dressed with the carbolic-mercury plaster or with a boric acid paste (equal parts of vaseline and zinc oxide + 4 per cent. boric acid).

The third indication, which is an important one, is easily accomplished by thorough disinfection of the skin in the neighbourhood of the boils, especially over the seats of predilection, nape of neck, axilla, uates, &c.

In this mode a diabetic patient who, in nine months, had suffered from 160 boils was completely cured in seven weeks (Veiel). The greatest possible cleanliness must subsequently be observed as to habits, dress, and bedclothes, and the patient should keep his nails cut short and abstain from scratching.

Leloir gives a striking example which, perhaps, illustrates this point of contagiousness. A young man presented himself regularly every winter with a carbuncle or boil on his neck. At the first approach of cold he used to put on a great coat, the collar of which was dirty. This coat had belonged to his brother, who died of a carbuncle on the neck.

The fourth indication resolves itself into correcting any obvious

derangement of health, and putting the patient under the best possible conditions of hygiene.

In the theory of causation we have to allow for factors other than the mere presence or accumulation of microbes in the blood and tissues—*e.g.*, depression of vitality, general or local, the existence of local inflammation, the influence of cold, injury, and individual predisposition; and, in regard to treatment, we must not overlook the influence of the state of the blood—witness, diabetes and albuminuria—and the possible modifications of the soil that may be brought about by the state of the digestive organs, diet, and internal medicines (*cf.* Watson Cheyne, *loc cit.*, p. 68); but upon these points it will, I imagine, be conceded by all that our knowledge is very defective.

One drug only may be mentioned.

I have no faith in the reputed virtues of calcium sulphide, in the prophylaxis or treatment of furunculosis, acne, and suppurating glands, and would place it side by side with that ludicrous specimen of therapeutic empiricism—*viz.*, the treatment of amenorrhœa by pills of potassium permanganate.

ART. II.—*Acute Double Pneumonia successfully treated by Bleeding and Inhalation of Oxygen.*<sup>a</sup> By GEORGE FOX, F.R.C.S.I.; Surgeon to the Whitworth Hospital, Drumcondra.

THE case I bring under notice is that of a man, twenty-four years of age, who was admitted into the Whitworth Hospital, Drumcondra, on the 6th of June, 1891, suffering from pneumonia.

The disease extended over the whole of the left lung and the posterior lobe of the right.

When seen the temperature was found to be 104·6°, the pulse 112, and the respirations 36. A quinine and acid mixture was prescribed, and some pounded ice; this latter he took greedily and enjoyed greatly.

On the morning of the 9th of June he was so ill that death seemed impending; his face was almost purple, and his heart was acting slowly and laboriously, so that its stoppage seemed near at hand. Something had to be promptly done to relieve venous congestion, and I breathed the median cephalic vein and let blood to sixteen ounces. Immediately on the vein being cut a jet of

<sup>a</sup> Read in the Section of Medicine of the Royal Academy of Medicine in Ireland, December 18, 1891.

ink-black blood shot some six feet off, and when the stream was caught in a vessel and kept for days it retained its dark colour, and neither buffed nor cupped. Before the bleeding was stopped the patient expressed the greatest relief, and his face lost its dusky hue; the pulse became soft and compressible, and the patient fell into a sound sleep, which lasted for six hours.

Such good results were very satisfactory, but they were not permanent; in two days all the good effects were gone, and the old symptoms of venous congestion returned, and the disease, now in its eighth day, was pursuing an unfavourable course. Ammonia was prescribed, and a plentiful allowance of Valentine's meat juice ordered. Towards evening of this day—his fifth in hospital—respirations were 64 in the minute, and he was unable to hawk up the sputum; the temperature had fallen to 103°, but I did not think the fall of temperature betokened other than danger.

He commenced to wander in his mind and pick at the bed-clothes. The greater part of his trouble was, I concluded, due to interference with the oxygenation of his blood, and as three-fourths of his respiratory space was functionally useless, I saw no way of oxidising his blood other than by increasing the amount in the air he breathed. By the aid of Mr. Turner, of Messrs. Fannin, of this city, I got a suitable apparatus, and on the evening of the 11th the patient commenced the inhalation of oxygen gas, which continued from 7 p.m. to 7 15 p.m. Gradually all the lividity of the face disappeared, and consciousness returned. On the inhalation being discontinued he slept for an hour.

Although the oxygen gas was driven directly into the mouth-piece, which was placed between the patient's molar teeth, no excitement but quiet followed its administration. At 10 30 p.m. the inhalation was repeated, and again during the night. For four days oxygen was administered every three hours for 15 minutes at a time.

On the morning of the 12th, at 10 a.m., the temperature was 100·8°, respirations 40, and the pulse 106. He expelled the sputum without difficulty, and was able to answer questions, but not to make any long statement. Oxygen was continued until all the more urgent symptoms disappeared; 33 feet in all having been given. Resolution set in and proceeded but slowly, and it was not until the 24th of August that the patient was discharged.

During convalescence the patient told me that on the night of the 2nd of June he travelled from Liverpool to Dublin on the deck

of a cattle boat. He was thinly clad, and when the vessel was about half-way he got a severe shivering fit, and on reaching Dublin he went straight to his lodgings and got into bed ; a warm jar was placed to his feet, extra clothes put on the bed, and a fire lit in the room, nevertheless he felt "stone cold," and shivered in bed. Warm drinks were given to him, and he got rid of the shivers, but got a violent headache, and during the night his landlady declared he was delirious. He was better the following day, but became again delirious at night, and remembers nothing more until he found himself in hospital.

My object in bringing the case forward is to call attention to two old-fashioned methods of treatment—bleeding and inhalation of oxygen.

Perhaps no therapeutic remedy ever had so much talent given to the investigation of its action as oxygen. Leonardo da Vinci, in his treatise on "Air and Flame," published about 1480, describes the necessity for the gas and tells of its anti-putrescent power. Mayow, 200 years later, performed his well-known experiment on a mouse with his "nitro-ærial" spirit, stating "that the igno-ærial particles absorbed in respiration are designed to change venous into arterial blood." His experiments were, in 1774, repeated by Lavoisier and by his pupil, Beddoes, the father of "Pneumatic Medicine." Priestley also experimented with his dephlogisticated air, and was so delighted with the results that he entertained the idea of purifying public assembly rooms by means of his newly-discovered gas. Fontana and that able physiologist, the Abbé Spallanzani, all became interested in the therapeutic possibilities of "nitro-ærial" or dephlogisticated gas. Ingen-Houzen, in 1782, found that after the inhalation of oxygen his sleep was sweeter and more refreshing than usual. Poulle, in 1785, laid down certain directions for its use, and describes the conditions calling for the use of the "Vital Air," in which treatise, which was published in Latin at Montpellier, he recommends the inhalation of the gas to "those asthmatics whose condition is not caused by excess of irritability ;" and further, "it is the grand resource in restoring to life asphyxiated persons. Finally, it will prolong the last moments of the aged by rekindling in them the fire of life about to be extinguished." In a prize essay submitted to the Medical Society of Paris, in the Year of Liberty, on the therapeutic value of "Vital Air," he records the benefit a lady of thirty-one years of age, suffering from consumption, derived from its use.



Time does not allow of a chronological statement of the many medicinal uses to which oxygen gas was applied ; but I may mention that Dumas, in 1792, declared that its inhalation in phthisis was baneful, and performed some experiments on dogs which appear to support his views. "I think I can set forth," said he, "founded on experiments, taht the continued use of such an air would start in the lungs that degree of lively irritation which sometimes leads to a tuberculous or ulcerous state, of which that disease is the necessary consequence." We should not, however, forget that Dumas in his experiments used oxygen obtained from oxide of mercury, the impurity and danger of which was pointed out by Priestley. Beddoes adopted the views of Dumas on the action of oxygen in phthisis, and he treated the disease with sub-oxygenated air, and he supported his theory by the statement that pregnancy arrested phthisis; and he asserted that the blood of pregnant women is deficient in oxygen. Reasoning from these grounds, Beddoes, in his pneumatic hospital at Clifton, confined phthysical patients to rooms in which by charging the chamber with hydrogen gas he produced an atmosphere deficient in oxygen. The Hotwells Hospital became famous for its treatment of palsy, epilepsy, asthma, chlorosis, hysteria, typhus, dyspepsia, and even leprosy, by the pneumatic process.

The staff was enthusiastic in praise of the method, and their labours were apportioned thus:—Mr. Watts attended to the apparatus; Mr. Davy prepared the factitious airs; and Dr. Beddoes took charge of the patients. The patients were directed to take "the point of the faucet between the lips, inhaling from the bag through the mouth, and to expel the air from the lungs through the nostrils, which operation most patients readily acquire a habit of performing with ease." The reputation of factitious airs in almost every form of disease was heightened by the publication by Dr. Beddoes of letters from Drs. Thornton, Cross, Barr, Carmichael, Pearson, and others, all lauding the new remedy; and in 1795 Mr. James Watt published a tract on the subject.

The first use of oxygen gas in this country of which I can find mention is that of Dr. R. Reid, who read a paper before the Association of the Fellows and Licentiates of the King and Queen's College of Physicians in Ireland on the 7th of July, 1817, entitled "The Use of Oxigen Gas in Angina Pectoris," which appears in the first volume of the Transactions of the Association.

Gradually the remedy fell into disfavour; probably the impurities



that were present in all specimens of the gas prior to its being prepared from atmospheric air had much to do with its being laid aside. Within the last few years, however, the gas is coming to be largely used as a therapeutic agent of undoubted value; and since MM. Brin have succeeded in producing a perfectly pure oxygen the remedy can be easily tested and its merits decided. Cobell, in 1874, published a series of interesting and valuable articles on oxygen as a remedy in disease, in the *Virginia Medical Monthly*. And Dr. Goolden, of St. Thomas's Hospital (*Lancet*, Oct. 25th, 1879), found that oxygen gas promoted the healing of a sloughing ulcer of the throat. Dr. Francisco Valenzuela, of Madrid, in a paper before the Academia Médico-Quirúrgica, in May, 1887, stated, as the result of a number of experiments made by him on rabbits to determine the effects of oxygen of high tension on the animal organisation, that he found it invariably to lower pyrexial temperature.

The Council of Municipal Hygiene of Paris, in June, 1888, directed Dr. Voisin to draw up a code of instructions for the administration of oxygen gas to the asphyxiated. Not long since the *Medical Press and Circular* reported the successful administration of the gas to a man who was asphyxiated from carburetted hydrogen gas.

In my book on Anæsthetics, I have recommended the gas as a remedy in anæsthetic narcosis. The therapeutic use of the gas is being tried in every country and for the great majority of diseases; but its value in pneumonia seems not to have attracted much attention, as may be seen by consulting Neale's Digest. Dr. John Chambers has, in the *Lancet*, reported favourably of its use in a severe case of pneumonia—indeed he ascribes the patient's recovery to its use; and his is the only British case I can find a report of.

Abroad it has been generally used for pulmonary diseases. Amongst the warmest advocates for its use are Wallian, of New York, whose numerous papers on the subject are summarised in Sajous' Universal Medical Annuals for 1888, 1889, 1890, and 1891, and Dr. W. G. Thompson, whose paper is noticed in Cassell's Year Book for 1890, and in Sajous' great work.

No matter what theory we may accept of the pathology of pneumonia, I think we cannot go far astray in employing Nature's antiseptic—an innoxious agent, and the one of all others most suited for the aeration of the blood and the oxidising of the broken-down tissues, and so facilitating their elimination by the kidneys. And not the least of its benefits is that of giving sleep to the worn-out patient—natural, refreshing sleep.

ART. III.—*Diseases of the Fallopian Tubes and their Treatment.*<sup>a</sup>

By THOMAS MORE MADDEN, M.D., F.R.C.S. Ed.; Obstetric Physician and Gynæcologist, Mater Misericordiæ Hospital, Dublin.

THE differential diagnosis and successful or radical treatment of Fallopian tube diseases have only become obtainable within a recent period; and for that advance we are largely indebted to the teaching and practice of Mr. Lawson Tait and some other leaders of the modern school of abdominal surgery. Nevertheless, it may not be superfluous to remind you of the somewhat generally ignored fact that the disorders of the uterine appendages were by no means unfamiliar to many of the older writers, by whom, and more especially by Astruc,<sup>a</sup> of Paris, in 1761, and by Kruger,<sup>b</sup> of Gottingen, in 1782, their pathology was fully discussed; whilst by others very remarkable instances of what we now term pyo-salpinx, and hydro-salpinx, as well as other tubal troubles, have been narrated. Thus Portal<sup>c</sup> quotes, *inter alia*, a case from De Haen of “abscess in the left Fallopian tube which contained eighteen pints of pus;” and another from Muniëks of “an enormous Fallopian cystic tumour, the contents of which were estimated at upwards of a hundred gallons”! He also cites from Harden the instance of “a woman in one of whose Fallopian tubes was found encysted a hundred and forty pounds of an aqueous fluid”! These or other cases of Fallopian disease were also referred to by Bailey,<sup>d</sup> Hooper,<sup>e</sup> and other writers of the first two decades of this century, and above all, a little later, by Dr. Davis,<sup>f</sup> by whom the symptoms and pathology of diseases of the oviducts as then understood were distinctly described in 1835. From that time may be dated the general recognition of the fact that the Fallopian tubes, being so intimately connected as they are structurally and functionally with the uterus, must necessarily be therefore liable to inflammatory diseases similar to those which affect that organ, however modified these may be in their symptoms and consequence by the special organisation and relations of the oviducts.

<sup>a</sup> Astruc. *Traité des Maladies des Femmes*. Paris. 1761.

<sup>b</sup> Kruger. *Pathologia Ovariorum Muliebrum*. Gott. 1782.

<sup>c</sup> Portal. *Cours de Anatomie Médicale*. Tome V., p. 540.

<sup>d</sup> Bailey. *Diseases of the Uterus, &c.* P. 504.

<sup>e</sup> Hooper. *Morbid Anatomy of the Human Uterus*. P. 3.

<sup>f</sup> Davis. *Obstetric Medicine and Diseases of Womb*. Vol. II., p. 760. 1835.

The diseases which may be thus transmitted to the Fallopian tube not only from its uterine orifice but also through its free peritoneal extremity, or which may originate within its structure, are, firstly, inflammation, or salpingitis, and its consequences—viz., pyo- and hydro-salpinx—of which probably the most common causes are gonorrhœal infection and puerperal sepsis. Besides these the oviduct may, moreover, be the seat of encysted, fibromuscular, and malignant tumours.

*Acute Salpingitis.*—Acute inflammation of the Fallopian tubes may be here very briefly disposed of, inasmuch as salpingitis is seldom brought under gynæcological notice until the disease has reached the chronic stage. It is most frequently observed attending the puerperal state as a complication or consequence of septicæmia, when its occurrence is indicated by deep-seated, throbbing pain, extending from the iliac region into the groins and thighs, together with local tumefaction and tenderness, recognisable by conjoint recto-abdominal or bimanual examination over the course of the broad ligaments, in which the tortuous outlines of the hyperæmic and enlarged oviducts may be thus detected. The most common result of acute salpingitis is the chronic form of the disease. It may, however, also terminate in resolution or cure, as well as in the occlusion or obliteration of the ducts in any part of their course by the cohesion of their walls from plastic inflammatory exudations. As to the treatment of such cases, I know of nothing very reliable that can be recommended beyond allaying pain by opiates and administering quinine in combination with iodide of potassium or bichloride of mercury. Hot water vaginal, and rectal, irrigation and external stuping are obviously indicated, and are most likely to prove successful in acute catarrhal salpingitis, whilst it is difficult to see what possible benefit can be produced by counter-irritation by blisters or strong mercurial ointment over the inguinal region, which though still occasionally employed in such cases, are more likely to add to the discomfort of the patient than to cure the disease.

*Chronic Salpingitis* may affect either one or both tubes; more generally both are implicated, although in different degrees. Its extrinsic causes may be either gonorrhœal, puerperal, or catarrhal, whilst occasionally it may arise from local causes, such as tubercular and cancerous deposits in the tubes. Moreover, as might be expected, salpingitis and its consequences are more frequently met with during the earlier period of marital life, and in those in

whom the utero-ovarian or sexual functions have been most exercised, than in patients more advanced in years and of non-erotic temperament. Thus Dr. Bland Sutton, who in his pathological investigations has had an extensive opportunity of examining the bodies of a large number of women of ill-fame, in most of these instances discovered evidences of hyo- or pyo-salpinx, or in some cases found one or both Fallopian tubes represented by an impervious cord and the ovaries atrophied and unrecognisable. This induces him to believe that the frequency of tubal disease between the age of twenty and thirty-five years and its relative rarity after the fortieth year is to be accounted for by the fact that, if the individual survive the dangers incident to an inflamed and distended tube, the diseased parts atrophy.

*Symptoms of Chronic Salpingitis.*—The general symptoms of chronic salpingitis, before the disease has eventuated in pyo- or hydro-salpinx, are scarcely distinguishable from those of the generally co-existing oöphoritis, and, later on, its effects and evidences are symptomatically almost identical with those of pelvic cellulitis or perimetritis, and in former days were commonly confounded with that disease. Of these symptoms of chronic tubal disease the most important are the recurrence of otherwise unaccounted for, and generally unrelievable by ordinary treatment, attacks of menorrhagia attended with dysmenorrhœa, or impeded through protracted or excessive menstruation. In such cases the patient further complains of a characteristic deep-seated, intra-pelvic pain which—in some instances from the first, and in almost all cases during the progress of the disease—sooner or later becomes acute or lancinating, shooting out into the sacral and inguinal regions, and extending down the thighs. At the same time may be also noted evidences of constitutional febrile disturbance and pyogenic rigors, and in some cases intra-menstrual hæmorrhages or aqueous discharges from the uterus, together with local tumefaction and tenderness in the course of the oviduct discoverable on examination per rectum.

*The Pathology of Pyo- and Hydro-Salpinx* has recently been fully investigated by a distinguished pathologist, Dr. Bland Sutton, and I cannot do better in this connection than place before you the following abstract of his observations on this subject, which may be found *in extenso* in the *Lancet* of December 6, last year:—

“*Pyo-Salpinx.*—In severe cases of salpingitis after occlusion of the abdominal ostium, accompanied, as is usual, with stricture of



the uterine end of the tube," the pus, says Dr. Bland Sutton, "is as securely locked up in the tube as it would be in a deep-seated abscess, and it follows the course of an abscess. The walls of the tube, stretched by the accumulating pus, gradually thin, and the inflamed tube becomes adherent to surrounding structures—ovary, uterus, rectum, intestine or broad ligament. The wall of the tube continues to thin until, on some slight exertion, it bursts. If the pus be discharged into the peritoneal cavity, it establishes rapidly fatal infective peritonitis. Right pyo-salpinx is very prone to open into the rectum. When a pyo-salpinx lies in contact with bowel, the pus it contains becomes abominably foetid, due to osmosis of the intestinal gases. The relation of pyo-salpinx to the rectum must be studied in connection with tubo-ovarian abscess. The first effect of salpingitis upon the ovary is to cause thickening of its capsule, and if lymph is effused upon its surface this may organise and extensive perimetritic adhesions result. The effects of this thickening of the capsule are twofold. At first it prevents the rupture of ripe ovarian follicles, and the tension gives rise to considerable disturbance and causes pain; and as the enlarged follicles cannot discharge their contents, it naturally follows that on section an ovary which has long been the seat of peri-oöphoritis will be found largely converted into cystic spaces, and two or more may become confluent and form a cyst the size of a walnut. As such a cyst enlarges and makes its way by absorption to the surface, it not infrequently comes into relation with and adheres to the dilated pus-containing ampulla of the corresponding tube, which has been brought in contact with it through the restraining influence of the tubo-ovarian ligament. Not infrequently absorption takes place, and the dilated ampulla of the tube will communicate with an enlarged follicle or cyst in the ovary, and thus give rise to a tubo-ovarian abscess, which may be discharged by way of the rectum at irregular intervals."

When the infective qualities of pus are not great a pyo-salpinx gives rise to few symptoms. It is this form of pyo-salpinx that, as Dr. Sutton believes, becoming gradually dilated with fluid, is eventually converted into a hydrosalpinx, which, as a rule, may be regarded as merely a late stage of pyo-salpinx.

Many milder attacks, however, may be described as "catarrh of the tube," and like a nasal or gastric catarrh subside and leave no trace. If the inflammation is sufficiently intense to seal the ostium permanent damage results, and if, as is so commonly the



case, both tubes are affected, they remain throughout life functionless, and often a source of grave danger. In cases of salpingitis sufficiently severe to occlude the ostium the tube is, after the subsidence of the inflammation, in the condition of a blocked ureter; there is no escape for the fluid which is excreted by the glands in its walls, or for the fluid which passively exudes into its cavity. It consequently forms a cyst by retention. The fluid is either colourless or greenish owing to the presence of cholesterin.

In some instances the fluid, as before stated, may escape at irregular intervals through the uterus, constituting what has been described as "*hydrops tubæ profluosis*," and which is accounted for by Dr. Sutton as resulting from the occurrence of Fallopian fistula in such cases. In other instances, again, the exudation may take place through the abdominal ostium of the tube, possibly giving rise to fatal peritonitis, or in non-septic cases to "*hydro-peritoneum*," which has been defined by Mr. Alban Doran as a collection of fluid in the peritoneal cavity that cannot be referred to any tangible organic disease, except chronic salpingitis of a mild type with an unobstructed tube.

Before referring to the treatment of these conditions, I shall in the first place briefly recapitulate the excellent notes taken by my clinical resident, Mr. Whyte, of a case of chronic salpingitis, which may serve to exemplify the ordinary course and results of that disease:—

CASE.—A. O'N., aged twenty-four, unmarried, an anæmic-looking draper's assistant, admitted October 17th, suffering from menorrhagia for two years previously. The changes, she stated, lasted from six to eight days, and were accompanied by much suffering. She also complained of almost continual pain in left groin and backache, together with a bearing-down sensation.

On vaginal examination the position of the uterus proved normal, and nothing beyond some slight endo-cervicitis being apparent except an unusual flattening of the roof of the vaginal posterior *cul-de-sac*. An examination by the rectum was made, on which distinct fulness and fluctuation was discovered in Fallopian tube, which was much enlarged. The aspirator was employed, and a long needle was passed through vaginal *cul-de-sac* and guided by finger *in situ* to most prominent part of tumefaction, at which it was introduced, and on turning the tap about six ounces of turbid puro-serous fluid was evacuated. No subsequent dressing was employed; the vagina and uterus both daily irrigated with hot water. She was put on iodide of potassium and bark mixture. Rapidly convalesced, and was discharged on December 9th.

*Treatment.*—In the treatment of chronic salpingitis and the resulting pyo- or hydro-salpinx, it appears to be not unfrequently lost sight of, that in these, as in all other cases, the gynæcologist should set before him not only the removal of disease, but also the restoration of the functional and structural integrity of the affected organ, as far as these objects can possibly be combined and accomplished, and that only where the latter is impracticable, should he be content with the former. With this view several methods of dealing with the cases now under consideration have been suggested—viz., firstly, the removal of the contents, whether purulent or serous, of the distended tube by aspiration, as recommended by Dr. Routh, and some years ago by myself in papers read before meetings of the Royal Academy of Medicine in Ireland, the Brighton meeting of the British Medical Association, as well as at the Washington meeting of the International Medical Congress, in which I also discussed the expediency and showed the possibility of catheterisation of the Fallopian tubes in certain exceptional instances. Secondly, by free incision per vaginam, and subsequent washing out of the emptied tubes, as advocated by Dr. Sinclair. Thirdly, curetting the endometrium around the uterine ostium of the tube, and Emmet's operation. Fourthly, employment of electricity by the method of Apostoli; and, fifthly, by what may be termed conservative laparotomy—*i.e.*, abdominal section with the view either of aspiration of the distended ducts, or, as advocated by Mr. Alban Doran in some instances, for the purpose of breaking down adhesions and “freeing the diseased appendages.” Sixthly, may be here mentioned the resection of the tube by salpingotomy or Skutsche's operation. Seventhly and lastly, in this connection is massage as employed by Brandt in these cases.

I shall not here waste time by referring in extent to any of these procedures, save those that I have myself proved the practical utility of. This is not the case with regard to salpingotomy, concerning which, as well as other “fancy operations” that may more safely be demonstrated on a lecturer's diagrams than in a patient's body, I would re-echo Dr. Goodell's criticism—“The diseased parts cannot be handled in abdominal section without great risk. The tube is often tensely distended, and adhesion to neighbouring structures are usually intimate. Hence the tube may carefully be ruptured, intestines torn, and circumscribed collections of pus diffused.” As to massage, even if harmless, it would be objectionable for the general reasons I have mentioned when referring to this subject in a pre-

vious lecture. But in cases such as those under consideration, even that negative merit can hardly, I think, be attached to a procedure such as that by which, according to the writer just cited, one of its advocates—viz., Brandt—is credited with venturing to attempt the emptying of a distended tube into the uterus by “rolling it gently between the fingers of both hands,” a manœuvre which, it is admitted, often causes “an escape of secretion into the peritoneal cavity, which readily gives rise to symptoms of peritonitis!”

Turning from these fond fancies of transcendental scientists or enthusiastic fadists to the sober realities of practical gynæcology, we may now consider the rational treatment of pyo- and hydro-salpinx, in regard to which there appears to me no reason to depart from the traditionally recognised first principles of surgery, by an indiscriminate resort, in the first instance at least, to such heroic operative measures as the complete extirpation of the uterine appendages. If the mammary gland, for example, becomes the seat of a purulent collection, or if, as Sir Spencer Wells suggests, the tunica vaginalis testis is the location of a hydrocele, would it not be more advisable to open the abscess or to tap the hydrocele than to amputate the breast or to remove the affected testicle? And must we then necessarily adopt an entirely different course as a matter of general practice in dealing with analogous conditions in other no less important organs?

Acting on these principles, therefore, for several years past, I have, in the first instance at least, treated a considerable number of cases of pyo- and hydro-salpinx by aspiration and other conservative measures. The successful results thus obtainable in many, though by no means in all, instances of this kind have been proved in my wards in the Mater Misericordiæ Hospital. The majority of cases of this kind were there treated by that method, to which I have elsewhere referred, before its advantages were recognised. This treatment, even if not as certain in its radical curative results as salpingotomy, is certainly quite as successful in that class of cases to which its employment should be restricted, and at least contrasts favourably as far as facility of performance and safety from danger with the latter operation which in other cases or after its failure may become no less expedient. Hence I shall venture for an instant to dwell on the details of the less serious method, which, as I believe, will in not a few instances be found to afford satisfactory results whenever tubal collections are accessible per vaginam. In the first place, to permit the necessary manipulation,

the patient should be put under some anæsthetic and placed in the ordinary left lateral gynæcological position. Then the operator introduces the index and first fingers of his left hand through the sphincter ani upwards and forwards along the outlines of the posterior uterine wall, the fundus being pressed down by his assistant's hand over the hypogastrium. In this way the tubes and ovaries can be readily palpated, and if there be any inflammatory or cystic enlargement of the former it may be distinctly recognised as a tortuous, elongated, or sausage-shaped or rounded fluctuating tumour, extending, as Dr. Wm. Duncan says, "from the side of the uterus outwards to the broad ligament and backwards into Douglas's fossa." Having thus ascertained the position of the pyo- or hydro-salpinx, the next step is to carefully introduce per vaginam on the point of the right index finger a long fine needle affixed to the aspirator up to the roof of the posterior vaginal *cul-de-sac*, through which it is to be passed into the retro-vaginal fossa, and thence guided by the operator's left index from the rectum up to the most prominent presenting part of the tubal swelling, into which it is to be plunged. The tap of the aspirator is then to be turned, so as to give exit to the contents of the dilated tube, the expulsion of which may be assisted by the steady pressure of the assistant's hand from about the hypogastrium down into the pelvic cavity, and continued until the tube is completely evacuated. After this the vagina should be rendered aseptic by insufflation with iodoform, and then no further local treatment beyond hot water irrigation will generally be required, unless the tube should, as sometimes happens, again fill, though probably to a lesser extent, when the same procedure may be again and again, if necessary, repeated until the oviduct has become reduced to its normal size.

*Curetting Fundal Orifice of Tubes; Treatment by Electricity.—*

Apart from malignant and other degenerative changes, the most common immediate cause of cystic accumulations in cases of chronic salpingitis is mechanical obstruction of the uterine orifice of the oviduct, due either to chronic follicular endometritis, flexion, or, in some instances, supra-involution of the uterus. Under such circumstances the tubal obstruction is most likely to be relieved by dilatation followed by curetting of the diseased proliferating endometrium in the first instance, or by the rectification of the flexion in the second, and by faradisation in the last-named cases. The faradic current has, moreover, not only in these, but also in other forms of chronic salpingo-oöphoritis, been in some instances suc-



cessfully employed by Dr. Apostoli, of Paris, who generally employs in such cases the faradic current of tension applied in moderate doses and for only a few minutes at a time, for which he claims the most remarkable curative results in such cases. Another recent authority on this subject—Dr. Milne Edwards, of Edinburgh, does not believe, however, that the galvanic current is suited to cases where there is definite organic change in the ovaries, but considers that here faradism may possibly be of service.

*Removal of Uterine Appendages.*—In those graver and, as I hope may yet be found by others of higher authority than myself, somewhat more exceptional cases than is generally supposed, in which, from the extent of Fallopian disease, or from the implication in its course of adjoining structures, the urgency of the symptoms attending its progress or other causes, it becomes impossible to deal satisfactorily or safely with such cases by the methods already referred to, and in which more active surgical intervention is obviously indicated, there then only remains for our adoption the complete removal of the uterine appendages.

That operation has, however, now come into vogue under other circumstances than these, being supported by a large number of modern gynaecologists, as not only the most efficient, but also, in the cases in which it is required, the safest method of dealing with the tubal diseases referred to; and hence the procedure which should be generally adopted in such cases. This doctrine I cannot, myself, altogether unreservedly accept, believing, as I do, that in some instances the results of salpingitis are curable without any active treatment, and that in other cases they are amenable to the minor measures I have described. Nevertheless, in this hospital and elsewhere I have met with cases in which the only apparent alternatives were either the speedy death of the patient from Fallopian-tube disease or else the complete removal of the affected appendages, by what is generally known as “Tait’s operation,” after the name of the distinguished surgeon by whom it was introduced, and has been most successfully carried out in this country. In the following observations I shall therefore very briefly describe that operation, or, at least, that method of performing it which you have here seen practised, premising that, regarding, as I still do, the ovaries and tubes as both essential factors in the menstrual function, it follows that when the latter are removed, with salpingotomy should also be combined oöphorectomy, to obviate the possible consequences of an abortive or abnormally-accomplished



process of ovulation. Nearly all the preliminary successive steps of this procedure being identical with those of ovariectomy, I shall merely allude to those points in which these operations may be contrasted. The first and most obvious of these is the smaller size of the abdominal wound required for removal of the appendages. This incision should only be just sufficient to allow the introduction of the two first fingers of the operator's left hand, which should be passed down to the fundus uteri, by the position of which he will be readily guided to the contiguous tubes and to the ovaries. In such cases the often widely-distended oviduct must be most tenderly handled to avoid extravasation into the peritoneal cavity of a pyo- or hydro-salpinx, which may occasionally be prevented by aspiration of the diseased tube before any attempt to draw it out through the abdominal wound, as must be the next step in this operation when not rendered impossible by extensive inflammatory adhesions. Having thus drawn out, as far as can be safely done, the affected tube and ovary, so as to form a kind of pedicle from the broad ligament, through the centre of which, carefully avoiding injury to blood-vessels as far as possible in so doing, a blunt-pointed needle carrying a double ligature of stout silk is to be passed. This ligature may next be secured by an ordinary "reef knot," which I have found sufficiently reliable and easier to make than it would be for me to acquire the probably still better "Staffordshire knot," the use of which has been thus described by Dr. Macnaughton Jones:—"A loop of double ligature is passed through the centre of the broad ligament, avoiding the vessels. The loop is then turned back so as to include both the ovary and tubes in the two loops thus formed. One free end is then passed through the returned loop; both ends are now drawn together and then cut off." Whatever ligature be employed it should secure the pedicle, from which the ovary and oviduct are next to be separated by a blunt scissors curved on the flat, a little above the point of ligation, which may be then dropped back into the peritoneal cavity. A similar procedure may then be adopted with regard to the remaining ovary and tube, after which the abdominal cavity may be washed out with warm water, the wound closed, and the case treated on the same general principles as an ordinary ovariectomy.

This operation, although under ordinary circumstances feasible enough to any surgeon, is occasionally, however, one that might puzzle the most dexterous specialist to carry into effect. The

difficulty of removing a Fallopian tube that may possibly be distended to the point of bursting by a pyo-salpinx, without risk in so doing of rupturing the thin tensely-stretched walls of the purulent sac into the peritoneal cavity, is obvious. But where, moreover, as occasionally happens in such cases, the ovaries and tubes are matted together, and to the ligaments, uterus, and other adjoining structures in one inextricable mass by inflammatory exudations and adhesions, that difficulty may be converted into an impossibility in some instances. I have myself had occasion to remove the uterine appendages in several cases, and, as I believe, have generally obtained results neither better nor worse than the average of other ordinary gynecologists. But, at the same time, I think it not improbable that such other practitioners as well as myself may have sometimes regretted that they had not either operated earlier or that they operated at all in those exceptionally unpromising cases to which I have just referred.

The immediately successful results now obtained from the removal of the uterine appendages in the majority of cases, and the very small mortality consequent on its performance in suitable cases in the hands of skilled specialists, has been proved beyond any possibility of question by the statistics of Mr. Tait's vast series of cases, as well as by those of Dr. Bantock and many other eminent surgeons. Of the ultimate curative results of removal of the uterine adnexa, however, a less hopeful view is taken by some authorities whose opinions on this subject are no less entitled to consideration. Thus Mr. Alban Doran observes:—"As a rule, oöphorectomy for chronic disease of the appendages is followed by speedy convalescence. Unfortunately, a permanent cure is not so frequent. Mental symptoms occasionally follow double oöphorectomy. The cases where the stump suppurates are particularly unsatisfactory. Fistulous tracts open, close, and re-open in the abdominal wound for months, discharging thin pus. Such cases find their way to the consulting rooms of others, or to other hospitals than the institution where the operation was performed. The operator hears no more of them, and he or the hospital registrar records them in perfect good faith as 'cures.' A larger minority suffer from a continuance of the pains which preceded the operation, probably on account of intestinal adhesions, or through irremovable inflammatory products which press on nerves. The ligatures certainly set up trouble in some cases."<sup>a</sup>

<sup>a</sup> Alban Doran, F.R.C.S., "On Treatment of Chronic Diseases of Uterine Appendages" in the *Lancet*, January 17, 1891.

Somewhat similar views have been previously expressed by other writers. Thus Dr. H. C. Coe, in the Proceedings of the New York Academy of Medicine, observed:—"There are not a few women now attending the various clinics in New York who have had their ovaries and tubes removed, and yet who complain of precisely the same pain as before; in fact, I can recall cases in which, although the menstrual disturbance is wanting, the pain is more severe than it was before."

I, therefore, think that, without in any way questioning the necessity for these operations in many instances, or the success and small mortality which has attended their performance in the hands of a few distinguished surgeons, the great body of medical practitioners who occasionally must meet and deal with cases of Fallopian tube disease, should be very slow to adopt operations the success of which can only be assured by exceptional skill, and that even where the circumstances of the case preclude the possibility of transferring the responsibility to those possessing that capacity, they should, before attempting to imitate their practice, at least fairly and fully try the less heroic but yet often successful methods of treatment to which I have already alluded. I have recently had clinical reason to know that the repetition of this recommendation is not superfluous at the present time, having in this hospital within the past couple of sessions met with the effects of its disregard.

A few years ago I brought the increasing frequency in general surgical practice of operations for the removal of the uterine appendages, and by no means only when rendered necessary by Fallopian disease, or for uterine myoma, under consideration in papers read before the Obstetric Section of the British Medical Association and elsewhere, to which I have already referred. And as the general accuracy of my opinions on this subject has been confirmed by my more recent experience, I may here recapitulate the views I then expressed, and still hold.

I fully recognise the fact that the first duty of the surgeon is to save his patient's life; and, therefore, if in a case of Fallopian tube, or other, disease, this can only be done by immediate removal of the uterine appendages, that this operation should then be at once resorted to. But under any other circumstances it should never be lost sight of that the uterine appendages are as essential to reproductive capacity in women, as are the testes in men, and that by their complete removal the patient is practically unsexed or incapacitated for the chief function and primary object of woman's married

life. Nor does it seem to me ever justifiable to perform such operations without the patient's full concurrence and knowledge of the consequences—a rule the propriety of which is obvious, and is now generally recognised and acted on. At the same time, however, it appears to me that the removal of the ovaries and Fallopian tubes is even yet occasionally somewhat too readily resorted to in non-organic disease as a possible means of benefiting neurotic and hysterical symptoms. It may, therefore, be well to repeat that other operations and methods of treatment have ere this been for a time as generally accepted; and then, having perhaps been carried beyond their judicious application, have fallen into desuetude. We have, therefore, no guarantee in the present frequency of resort to the removal of the uterine appendages that the same may not in course of time happen also with regard to these operations which, unquestionably valuable and successful as they have proved in the hands of some eminent surgeons, in cases of absolute necessity should, in my humble judgment, never be lightly regarded as measures of election.

The question of election or necessity I regard as the cardinal point to be decided in considering the expediency of removing the uterine adnexa in the treatment of Fallopian tube disease. In many instances, unquestionably, as I have already said, that course becomes an unavoidable necessity, and is then the obvious duty of the surgeon. It should never be forgotten, also, that in probably a no less large number of cases tubal diseases may be successfully treated by the much less heroic, but remedial and conservative, measures to which I have referred.

#### POISONING BY THE EXTERNAL APPLICATION OF TOBACCO.

THE following case of poisoning by the external application of the infusion of tobacco was reported in the *Journal de Médecine de Bordeaux*:—A young man suffering from pediculi pubis determined to kill the vermin by sponging his skin with an infusion of tobacco. He boiled 200 grammes of tobacco in 2 litres of water; with this he sponged himself freely, and in a short time repeated the application. Two hours afterwards he felt a dull heavy sensation in his head, followed by vertigo, blindness, and vomiting. He had cold sweats, cold purple-coloured extremities, and his mind began to wander. His respirations were diminished and he spoke with difficulty; the heart was very feeble and the pulse hardly discernible; the limbs were unsteady and tremulous on movement.



## PART II.

### REVIEWS AND BIBLIOGRAPHICAL NOTICES.

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#### RECENT WORKS ON LARYNGOLOGY.

1. *Transactions of the Twelfth Annual Meeting of the American Laryngological Association.* May, 1890. New York: D. Appleton & Co. 1891. Pp. 131.

2. *Diseases of the Nose.* By SPENCER WATSON, F. R. C. S. Eng., &c. London: H. K. Lewis. 1890. Second Edition. Pp. 312.

1. THE volume of Transactions of the Twelfth Annual Meeting of the American Laryngological Association contains seventeen papers, with full reports of discussions thereon. These transactions are well worthy of the attention of those taking especial interest in such matters; and some of the papers contain information useful to the general practitioner. Frank Donaldson, M.D., contributes a most interesting "Historical Review" of the laryngology of Trousseau and Horace Green, dealing with the period "anterior to Garcia's successful inspection of the larynx." The writer points out that Trousseau considered that the epiglottis formed an insuperable impediment to a view of the interior of the larynx; and his treatment consisted in applying solutions of nitrate of silver, injected by curved silver tubes passed behind the epiglottis.

Horace Green in 1846, by expert manipulation, succeeded in passing, by a probang, solutions of nitrate of silver into the larynx. A committee of the Medical and Surgical Society of New York condemned this practice, and publicly denied the possibility of cauterising the interior of the larynx; but Green triumphantly demonstrated his method in the case of a man who had attempted suicide by cutting his throat, and in whom the opening in the trachea had never healed.

H. L. Swain, M.D., has a careful paper on adenoid tissue in the naso-pharynx and pharynx, in which he describes the development of this tissue, and cites facts in comparative anatomy in relation to its occurrence otherwise than in man. The

writer discusses various theories as to the probable purpose of these structures, and cites the views (1) of Killian, who considers that their function is to destroy micro-organisms by the multitude of leucocytes present in them ; (2) of Spicer, Fox, Schmit, and Stöhr, that they take part in the production of blood ; and (3) of Davidoff, who considers that they assist in carrying some altered food into the system.

Dr. Swain himself inclines towards Killian's views.

One of the best papers in the volume is that of S. W. Langmaid, M.D., on Hoarseness and Loss of Voice, caused by wrong vocal method, in which he rightly inveighs against the evil effects of insisting, as many teachers of singing do, on the tongue being depressed and flattened during the production of *all* vocal sounds ; he shows that this, when insisted on, tends to produce serious and unnatural strain on the laryngeal muscles, which often ruins the voice.

A long discussion on the various methods of operation used for the correction of deviations of the nasal septum is reported, the outcome of which seemed to be in the direction of more or less disappointment with results in such cases.

On reading these transactions it is very clear that American specialists are at least not behind in knowledge and resource.

2. The first edition of Mr. Spencer Watson's work on "Diseases of the Nose" was published in 1875, and remained for many years almost the only book on the subject available for English readers ; and one is almost inclined to doubt the wisdom of the writer in not retaining his honourable position of a pioneer in a branch of medical work which has recently undergone a wonderful development, and has become generally recognised as possessing much importance in its bearing on various affections of other organs. By bringing before the profession a second edition the writer lays himself open to, on the one hand, a comparison which can scarcely be considered favourable with such a work as Bosworth's fine and exhaustive volume on the same subject lately noticed in this journal, and, on the other, to ignoble competition with the many—the very much too many—productions compiled by juvenile aspirants for the fees of a confiding public, whose lack of experience and judgment are only surpassed by their cool assurance in posing as authorities on matters, on many of which they must necessarily be incapable of forming

an opinion which could compare in value with the often very excellent paper on which it is printed. Therefore, we think that our author might have been better advised had he rested on the laurels which he so well won as a very early worker in this important field.

The book has been almost rewritten. This, of course, was a necessity. Many sections are entirely new, and much of the matter contained in the first edition has been omitted. The entire work, so far as it goes, is up to date, and we have the great advantage of Mr. Watson's calm and judicial conclusions on several subjects on which wild and untenable views have been broached, and very diverse opinions held, as, for example, in Section XVI., on Reflex Neuroses, p. 292.

The first section deals with the anatomy and physiology of the nose. It is unequal. There is a full description of the nasal mucous membrane, as regards its variations in the nasal and accessory cavities, and its histology; but the turbinates are curtly dismissed in a few lines, and with merely a passing reference to their erectile tissue—no mention being made of Zuckerkandl's important researches.

In Section II. is a description of the methods and appliances necessary for examination of the cavities of the nose and of the instruments required for treatment.

At p. 34, among "preliminary remarks on nasal stenosis," we fail to find any mention of turgescence of "the vascular membrane over the turbinated bones" due to vaso-motor troubles—a condition very important both from the pathological and practical side—the only causes mentioned are "temporary (as in catarrh) or permanent (as in chronic hypertrophy)."

At p. 47 is a short paragraph which it would be a pity to overlook. It shows an excellent sense of dry humour on the part of our author; in reference to the treatment of acute nasal catarrh, after giving details of several methods, he says:—"Many other remedies besides those enumerated above have been extolled as efficacious, and the difficulty of choosing from among them is therefore great." He then continues—"Multiplicity of remedies in this, as in other diseases, implies either a tendency to spontaneous recovery without remedies, or a doubtful efficacy of many of the remedies themselves." This is rather hard on Messrs. Sidney Ringer (aconite), Hagner (his "Olfactory"), Ferrier (his "Snuff"), J. Moure (his "Snuff" also), not to mention

other remedies recommended by bearers of less-known names. At the risk of appearing optimistic we may say that we have found that, at least, much temporary relief—often welcome during and after meals, or at night—may be obtained from using, either as spray or by simply sniffing, a small quantity of a lotion composed of equal quantities of hazeline, glycerine of borax, and a 6 per cent. solution of cocaïn.

We are quite in accord with Mr. Watson as to the scrofulous taint favouring the occurrence of hypertrophic rhinitis, although this view is not universally held by writers of authority on the subject. We also agree with him in his opinion that the electric cautery is “the most rapid, less painful, and more effectual” method of dealing with the hypertrophied tissues in this affection; in the milder cases we have obtained good results by the use of plugs of cotton coated with equal parts of glycerine and lin. iodi, a mode of treatment which is not mentioned by the author.

In the section on gelatinous polypi the operative methods now generally used are well described. We do not observe, however, that any mention is made of a method which we have found very useful in cases where, for any reason, the ordinary practice of snaring, &c., is not advisable—viz., the injection into the substance of the growth of strong astringent solutions, such as a saturated solution of tannic acid or solution of iron alum; some excellent results may be thus obtained. We are glad to find that Mr. Watson favours the after treatment by means of astringent applications, &c.

Mr. Watson seems to consider Dr. Negrier's treatment of epistaxis, by the raising perpendicularly upwards and retaining in that position the arm of the side affected, as something novel; we, however, have a very distinct recollection of the adoption of this method in our own juvenile person by an old nurse—with apparently successful results. Still we may, perhaps, at least allow Dr. Negrier the credit of an independent discovery in therapeutics.

In the treatment of tertiary syphilitic ulcers, while, of course, the chief reliance must be placed on the internal use of K.I., still we would not, as Mr. Watson implies, restrict the local use of mercurial applications to the cases in which the primary or secondary stages appeared not to have had the full benefits of a course of mercury, as we believe that there are very few cases in



which the local lesions will not be benefited by a wash or spray of perchloride, which has many advantages in ordinary cases over the calomel fumigation recommended by the author—although we are, at the same time, quite ready to admit that some intractable cases of ulceration seem to yield to the fumigation method when all others have failed.

We cannot altogether agree with Mr. Watson when he says (p. 118) that if, after a trial of full doses of K.I., “there is no amendment in the symptoms, it will be better to give up specific treatment altogether, and to rely upon topical applications and the internal administration of cod-liver oil and iodide of iron,” as we have seen more than one case in which there could be no doubt that the symptoms were those of the tertiary stage, and where the iodide of potassium had been given every chance without benefit, while immediate improvement followed the exhibition of carefully regulated doses of the green iodide of mercury combined with opium. We would not only agree with Mr. Watson as to the use of cod-liver oil, with or without the iodide of iron, in certain cases, but would go further and recommend its use as a “finishing touch” in the treatment of all cases of syphilis.

As might be expected from the very important advances made during the past fifteen years in reference to the far-reaching effects of vegetation in the naso-pharynx, and the methods of their treatment, the section dealing with this subject is quite new, only little more than a page having been devoted to this subject in the first edition. The section is practical and sufficiently full. The author quite recognises the fact that struma is a frequent factor in these cases, although, strange to say, this has been denied by writers of experience.

In dealing with disease of the frontal sinus, we find no mention of simple catarrhal inflammation of their lining membrane. This is not an unknown condition, and can give rise to much suffering. Mr. Watson is very dogmatic as to the most frequent cause of suppuration in the antrum. He says, in italics, “by far the most frequent cause appears to be the extension of suppuration from the root of a carious tooth, or from the periosteum surrounding it.” With this opinion we are inclined to agree.

The section on anosmia and other derangements of the sense of smell is good, and chiefly new.

In dealing with reflex neurosis depending upon intra-nasal disease (Section XVI.), the author speaks with commendable

caution. He gives a list of authors who have "in turn called attention to facts bearing upon the subject, and have formulated theories in support of the views propounded." Having recapitulated the long catalogue of disorders "*supposed* [the italics are ours] by Hack to depend upon turgescence of the inferior turbinated body," he says—"Hack also feels justified in treating rheumatic inflammation of the joints by cauterising the inferior turbinated body." Here, again, we think we can discern another instance of our author's humour. We fear he is not an implicit believer in Hack's novel treatment of articular rheumatism.

We think that in the following words Mr. Watson expresses admirably the opinions which should be held in reference to the subject. He says (p. 292)—"Without committing myself to the views thus laid down, I think there can be no doubt that in certain persons predisposed by an arthritic or some similar diathesis, intra-nasal disease will often produce some of these forms of nervous disorder. Asthma is the form of neurosis most commonly thus produced. About many of the others I feel considerable doubt."

The volume is liberally illustrated by plates and woodcuts, in both instances fairly up to the average of such as produced in these countries. There is a fairly full index, which includes the names of authorities quoted or referred to.

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*The Neuroses of Development.* Being the Morison Lectures for 1890. By T. S. CLOUSTON, M.D. Edinburgh: Oliver & Boyd. 1891. Pp. 138.

IN his preface the author thus defines the object of his work—"In the course of the growth and development of the brain there are liable to occur certain failures in the attainment of a working standard of nervous and nutritional health, and the resulting defects or diseases may properly be called 'Neuroses of Development.'" "The following lectures are a most imperfect and fragmentary attempt to treat of such defects and diseases looking at them chiefly from the developmental and relational points of view." The brain has attained about 90 per cent. of its final weight at the seventh year of life, while growth is complete at seventeen years. It is evident that even at the latter age functional perfection has not been attained. Hence

the functional development of the brain is very slow, and this makes it peculiarly prone to be influenced by hereditary evil tendencies.

The occasions which bring out the hereditary defects are taken as the basis of an attempt to classify developmental defects and diseases, most of which are neurotic in origin. They are placed under four heads:—

1. *Formation and Embryonic Stage*—including the deformities present at birth, as cleft palate, talipes, spina bifida, as well as others not so evident, such as fibroma molluscum, and some kinds of genetous idiocy.

2. *Period of most rapid Brain Growth, Special Sense Education, Motor Co-ordinations, and Speech* (from birth up to seven years).—Under this head we find, among many others, the following—rickets, hypermetropia, ichthyosis, and tubercular meningitis.

3. *Period of Co-ordination of Motion and Emotion* (from seven to thirteen).—Chorea, epilepsy, asthma, megrim, myopia, &c.

4. *Puberty and Adolescence* (from thirteen to twenty-five).—Chlorosis, interstitial keratitis, ingrowing toe-nail, subungual exostosis, naso-pharyngeal polypus, phthisis, acute rheumatism, barrenness, adolescent stupidity, adolescent ugliness, &c.

The examples we have given chiefly to show that Dr. Clouston pushes the idea of developmental influence rather further than most persons would be inclined to do.

He places great, probably too great, stress on the pathogenetic influence exerted by the development of the “absolutely new and tremendously intense feelings connected with reproduction” which appear at the time of puberty.

In the second lecture, on some of the morphological signs of a bad neurotic heredity that appear during development, we find a most interesting account of the observations made by the author on the deformities of the palate in neurotics. From a careful consideration, and guided by a new method of measurement, he classifies palates into three divisions:—1. The *typical*, or *normal*, corresponding to what was called by Joy the horse-shoe arch, having a low but regular and wide dome; 2. The *neurotic* has a more Gothic arch, with the alveoli tending to run more parallel for a greater distance than the typical, and with a much higher and narrower dome, the roof of which is formed by a larger part of a smaller circle; 3. The *deformed* is of various shapes, all abnormal, but the most common form is very high,

very narrow, and at the top either V shaped or saddle shaped. All these forms are illustrated by excellent drawings.

Of 604 persons of the general population examined, 40·5 per cent. had the typical palate, 40·5 the neurotic, and only 19 the deformed. Of 286 degenerate criminals only 22 per cent. had normal palates, 43 the neurotic, and 35 the deformed. Of 761 cases of acquired insanity there were 23 per cent. normal, 44 per cent. neurotic, and 33 deformed. Of 44 epileptics the numbers were 20, 43, and 37 per cent.; of 171 cases of adolescent insanity, 12, 33, and 55 per cent.; while of congenital idiots and imbeciles the numbers were 11, 28, and 61 per cent.

"In considering the palate and upper maxillary bone we must take into account the following considerations, viz.:—

"1. Its relation to the base of the skull in man. This relation is seen to be close and absolute, as compared with the lower animals. The perpendicular line, which marks the most anterior part of the brain, is seen to fall in man through the centre of the hard palate, while in the monkey it only just touches its posterior margin. In man it has thus a direct relationship to the brain base, and its shape would be dominated by the width of this, while in the monkey it is merely a part of the alimentary system, having little relationship to the base of the brain at all. No one can compare the two without seeing that its conformation in man will naturally follow any changes that take place during development in the skull base. 2. If the skull in its growth, its size and shape, its dome and base, is absolutely dominated by the brain which it defends and contains, then the brain growth will in this way secondarily determine the shape of the upper maxillary bone and the palate. 3. The brain unquestionably deriving its shape and size and qualities from ancestry, and a bad heredity determining a bad brain, we see how a bad nervous heredity would naturally determine an abnormal palate."

It would be impossible for us to follow Dr. Clouston through his descriptions of all the diseases which he looks on as developmental, or to reproduce his arguments and reasoning in support of his views. In some cases he appears to be too inclined to see everything through the nervous system, as when he says of rickets, "It is clearly a trophic neurosis, probably due to want of sunlight sufficient to give stimulus to the central trophic nervous centres which innervate the bones." And surely it is not fair to give the "terrible family tree" sprung from an asthmatic but otherwise healthy man as an example of what may be expected in the descendants of a person suffering from this distressing but common affection (p. 67).



Hysteria, from its late occurrence, is supposed to be more closely related with adolescent insanity than with any other of the developmental neuroses. Hysteria is looked on as "a cortical disease, probably taking its special form from functional disturbances in those mental cortical centres where the reproductive impressions are received from their organs, and where those impressions are brought into relationship with the innumerable emotions, desires, and volitional efforts that relate to reproduction or arise out of it."

What we have given is perhaps sufficient to show the wide scope and philosophic character of these lectures. It is impossible to fail to recognise their importance, although we may, in some cases, think the views of the author are somewhat extreme. The numerous well-recorded and suggestive cases by which the lectures are illustrated add greatly to the value of a most excellent work.

#### RECENT WORKS ON ANATOMY.

1. *A Treatise on Practical Anatomy.* For Students of Anatomy and Surgery. By HENRY C. BOENNING, M.D.; Lecturer on Anatomy and Surgery, Philadelphia School of Anatomy, &c. Philadelphia and London: F. A. Davis. 1891. Pp. 481.
2. *Quain's Elements of Anatomy.* Edited by E. A. SCHÄFER, F.R.S., and GEORGE D. THANE. In Three Volumes. Vol. I., Part II. By PROFESSOR SCHÄFER. Tenth Edition. London: Longmans, Green, & Co. Pp. 261.

1. THERE are some books which set us athinking; the "Treatise" under notice is one of these. Works on anatomy are not popularly considered to be conducive to meditation. The above must be an exception. Ever since we read it we have been meditating over a question which a run through the book immediately suggests—What can have induced the author to undertake to write on anatomy? Up to the present we have been unable to arrive at any solution of the puzzle. Under the name of an anatomical treatise we have never read anything like it. If we had been shown the book in manuscript, and asked what we thought it was, our reply would have been "A student's anatomical note-book—*uncorrected.*"

The author is very modest when speaking of his work in the preface. He says—"It will be found fully abreast of the latest teachings in anatomy, and in some directions decidedly aggressive." Decidedly aggressive we must admit it is. Again we read, "the book is not a compilation." This, too, is evident, and to be regretted. And he adds, "the descriptions have been taken from the subject on the table." If so, we cannot get such subjects in this country. In ours we do not usually find the capsule of the hip-joint attached to the posterior intertrochanteric line, the radial artery crossing over the back of the base of the metacarpal bone of the thumb, nor the posterior interosseous artery running along the interosseous membrane. Our subjects rarely treat us to a radial nerve which "*accompanies the radial artery and is distributed to the muscles of the forearm and thumb and to the integument of the dorsal surface of the thumb, index, and middle fingers.*" Nor can we consider that such descriptions as the following are "fully abreast of the latest teachings in anatomy":—"Middle cerebral artery lies in the fissure of Sylvius, and sends branches to the meninges." No more information is vouchsafed on the subject, which is one of no small importance. "*Hunter's canal* is an oblique canal through the adductor magnus." The "temporo-sphenoidal convolutions are horizontally disposed," &c. "The corpus striatum rests on the anterior portion of the crus cerebri of each side." But the most unique thing in the book is probably the charmingly simple explanation of the brachial plexus. It is really refreshing in its novelty and simplicity. To do it justice we must quote the passage in full. We are told:—"The arrangement of the plexus can best be understood by the following formula:  $3 \text{ nerves} + 2 \text{ nerves} = 2 \text{ trunks} + 3 \text{ cords}$ , or briefly,  $3 \text{ N} + 2 \text{ N} = 2 \text{ T} + 3 \text{ C}$ ." (It is to be remembered that this is neither a chemical equation nor a problem in algebra.) "In explanation" (the description goes on) "let it be remembered that five spinal nerves enter into the brachial plexus; that the fifth, sixth, and seventh unite to form the upper trunk; and that the eighth cervical and first dorsal unite to form the lower trunk: here we get  $3 \text{ N} + 2 \text{ N}$ , which equals the sum of 5. Draw a line through the plexus, internal to the two trunks formed by the five nerves, thus:—" (Here comes a meagre diagram, which seems to give very little assistance in elucidating matters; still the text runs on happily) "and the rest of the formula becomes clear, forming 2 trunks plus 3 cords, or in full  $3 \text{ N} + 2 \text{ N} = 2 \text{ T} + 3 \text{ C}$ , and from the cords the principal

branches of the brachial plexus are given off. The figure 5 is the key to the plexus."

And this is called Anatomy!

2. We have already noticed two parts of this work; we have now a third before us. The two former parts were devoted to Development and Osteology respectively, the present one is on General Anatomy or Histology. We understand that there are still to come three other parts, which will complete the work: that on Ligaments, Muscles, and Vessels is nearly ready. In writing of the divisions which we have already reviewed we almost exhausted our store of praise. We need only say of the present part that it is a fitting companion for its predecessors. It is a thorough, clear, and scientific exposition of the subject of general histology, fully in touch with the best and latest teaching of the day.

It should be pointed out that the part embraces only the histology of the tissues and systems—viz., of the epithelia, the connective tissues, including blood, cartilage, and bone; of muscle, nervous tissue, the blood and lymph vessels, lymphatic and secreting glands, mucous membranes, and the skin and its appendages. There is also an excellent introductory chapter on the cell, protoplasm, and cell division, which is entirely new. It gives a thorough *résumé* of the recent advances in the anatomy, physiology, and chemistry of the cell—subjects to which much attention has been paid of late in several great schools of biology. The histology of special organs is still to come in later parts.

It would be useless to attempt to mention all the additions which have been made to this division of the work in the present edition. The whole part has been almost completely re-written, so that many of the old descriptions have either disappeared or been much altered in accordance with more modern teachings. As in former editions the work bears traces of the greatest care, and the most patient labour. The descriptions are in the clearest and most direct scientific language; they are as brief as the nature of the subject and the character of the work would permit. Every line seems to have been thoroughly weighed and considered before being put into its place. The result is the production of a whole so solid and compact that it strikes the reader at once as being sound in every fibre. There is an earnestness and an impressiveness about the style which carries with it conviction and satisfaction. One

leaves down the book with a feeling that the information he has got is thoroughly reliable, and that he has read the best that can be said on the subject.

The illustrations, which form a notable feature of this tenth edition, are very beautiful. Many of them are old friends of former issues, but a large number are quite new—particularly is this the case in the chapter on the cell. The figures illustrating the histology and development of bone call for special commendation, as do those in the chapter on nervous tissue.

In conclusion, we are thoroughly pleased with the book before us. We feel that "Quain" is almost a national institution in which we are all deeply interested. As the great Anatomy of our language we look upon it with pride, and we watch its progress with jealous eye. We feel fully satisfied that in the hands of its present editors its characters and its fame are safe, and we can only add our warm congratulations upon the success with which they have so far accomplished the difficult task which has fallen to their hands.

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*The Johns Hopkins Hospital Reports.* Vol. II. No. 6. Report in Neurology I. Baltimore: The Johns Hopkins Press. August, 1891. Pp. 78.

THIS part of these valuable hospital reports contains four papers, all of considerable interest.

The first is a Case of Chorea Insaniens, with a Contribution to the Germ Theory of Chorea, by Dr. Henry J. Berkley. It details the particulars of a fatal case of chorea, with delirium, occurring in a young woman, aged twenty-seven, with the *post-mortem* examination. No bacteria were actually found in the nerve centres, but the changes found in the brain, meninges, and kidneys were very similar to those found in other unquestionably bacterial diseases, as diphtheria. They are—general hyperæmia of the internal organs; patchy endo-arteritis, with foul increase of round cells in the neighbourhood of the vessels; general increase in the number of leucocytes in the vessels; swelling of the endothelium; slight œdema of meninges and brain; granular and fatty degeneration of the renal epithelium; fatty degeneration of the heart muscle; hyaline globules in the lumen of many vessels; hyaline masses round the same; granular detritus; leucocytes in meninges enclosing fatty particles; round-celled foci in kidneys. The appearances were



similar in a dog suffering from chorea when killed. It is concluded that chorea is a general systemic affection, acting with greatest intensity on the vascular system and lepto-meninges, and that its cause is to be sought for in an especial bacillus or its toxical product.

In the second paper Dr. Charles E. Simon records three cases of acute angio-neurotic œdema. The affection first described as a distinct disease by Quinke, in 1882, under the term *Acut. umschriebenes Hautödem*. All these cases occurred in young women. The paper is an important contribution to the literature of this ill-understood affection. A good bibliography of the subject is appended to the paper.

The third paper is on *Hæmatomyelia*, by Dr. Aug-Hoch. Two cases are recorded in which, suddenly, some time after an injury to the back, paralytic symptoms supervened. Neither case died, so that the diagnosis is conjectural. The cases are distinguished by the great care with which they have been examined and recorded. The differential diagnosis is made from *hæmatorrhachis*, acute myelitis, and acute ischæmic myelomalacia. The subject is argued with great acuteness and ingenuity, and there can be little doubt on the reader's mind that the diagnosis of *hæmatomyelia* is justified. In one of the cases the form of the paralysis is that described by Brown Séquard as following unilateral injury of the cord, motor paralysis on one side, loss of sense of temperature, and pain on other side.

In the fourth paper, Dr. Henry M. Thomas records a fatal case of cerebro-spinal syphilis, with an unusual lesion in the spinal cord. The following are the clinical and anatomical summaries:—

*Clinical Summary*.—Male, aged thirty-three; no syphilitic history; paralysis of right sixth cranial nerve, accompanied by intense headache in January, relieved by treatment. In May, headache and paralysis of left fourth nerve. In November, paralysis of left third and fourth nerves; weakness of the muscles on the right side of the body, with slight sensory changes; increasing coma; death.

*Anatomical Summary*.—Syphilitic orchitis; syphilitic endoarteritis (gummatous) of cerebral arteries; gumma on left third nerve, involving left anus; gummata on left fourth, right sixth, ninth and twelfth nerves, and in brain; gumma on anterior roots of third cervical nerves; meningitis of cord; polio-myelitis of lumbar enlargement; hyaline degeneration in the walls of the small arteries.

The anatomical changes found are illustrated by a large number of highly demonstrative drawings. The case is of very great

interest, particularly as illustrating the changes produced by syphilis in the cord, a subject as yet very imperfectly investigated. Besides the hyaline degeneration of the vessels and capillary hæmorrhages, a condition of the lateral tracts was found which is considered to be an early stage of secondary degeneration. In the grey matter of the lumbar enlargement there was found extensive destruction—an anterior polio-myelitis, accompanied by capillary hæmorrhages, which had gone so far in some places as to cause the breaking down of the tissues and the formation of cavities of quite considerable size, which had probably been preceded by comparatively large hæmorrhages. It is thought most probable that the changes in the grey matter were not primary, but secondary and dependent upon the lesion of the blood vessels.

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*Epidemic Influenza; Notes on its Origin and Method of Spread.*

By RICHARD SISLEY, M.D. London: Longmans, Green, & Co. 1891. Pp. 150.

THIS able and vigorously-written monograph has for its object to prove that influenza does not arise suddenly from any general aerial contamination, but that it begins always by isolated cases and spreads from these by infection until it reaches the dimensions of an epidemic.

The cases reported in which a whole town or continent was simultaneously affected are found, when submitted to strict examination to be wanting in proof, and the same may be said of the reported outbreaks on board ships at sea, and which have had no communication with the shore.

Influenza seems to be endemic in China, and very prevalent in Central Asia. The epidemic of 1889-91 appears to have had its starting point in Bokhara, where the height of the epidemic was reached in July, 1889. St. Petersburg was affected in October, and the height of the epidemic was attained in November. In Berlin and Vienna the disease was a month later. In both cities the greatest mortality was in the same week in December—a month later than in St. Petersburg, and a week earlier than in Paris. From the latter city the disease was imported to Montpellier, also to Frontignan; and many other examples of spread by intercourse with infected places are recorded from France. In all instances isolated cases preceded the outbreak of the epidemic, and the height of the disease was only gradually

reached, as in other infectious diseases. A very remarkable case is recorded from Brest. There were three ships lying close to one another. One of the officers of the "Bretagne" contracted the disease on shore, apparently by infection through parcels received from Paris. After having infected his wife and three servants on shore, he returned to his ship. There the disease broke out, and spread rapidly among the crew, 25 to 40 new cases occurring daily. Some of the sick persons were allowed to go to their homes. In every case the disease spread to the members of their families. All this time the two other ships lying close were free from the disease. The case is almost conclusive as showing that the disease is not spread by the air, but by contagion from the sick. In London, naturally, great difficulty is experienced in tracing the origin of an epidemic. But there numerous local outbreaks are recorded in all of which the disease began by isolated cases, and gradually extended from these until an epidemic was reached. One of the best observed of these is the outbreak in Broadwood's piano manufactory, as recorded by Dr. Delépine in the *Practitioner*. Both in London and the other large English and Scotch towns, and still more in the country districts, everything pointed to contagion as the cause of spread, and not any general microbe affecting the whole community simultaneously. This was shown by the invariable occurrence of isolated cases before the epidemic, the introduction of the disease in many instances by persons who came from an infected locality, and by the fact that the spread of the disease was along the most frequented lines of human intercommunication. It is manifestly impossible in a country like England to trace the route of infection in every case. "When these facts are borne in mind, it will readily be acknowledged that the unexplained appearance of the disease in an isolated place only points to our incomplete knowledge as to its introduction there, and need never excite wonder." London was affected in October, 1889; Manchester, in November; Colchester, Canterbury, Chelmsford, Oxford, and Liverpool, early in January; Birmingham, in second week of January. Places more remote, as Feversham, Stourbridge, and Wimborne were reached in February, the rural parts of Derbyshire in the third week, of February, and in March the disease was spread in the more thinly peopled portions of Wales.

As further showing the influence of contagion in the fact that persons leading an isolated life escaped. So, many persons escaped

altogether although the epidemic was raging in the towns in which they were situated ; and in those cases where the disease did occur in prisons, the prisoners suffered much less than the attendants whose intercourse with the town was freer. The same is true of the inhabitants of poorhouses and convents.

The question as to whether infection can be spread by fomites is left undecided. There are many cases recorded which appear to show that this is possible, but none of them are absolutely conclusive.

Great difficulties are experienced in fixing the incubation period of influenza ; but many well-observed cases are reported which would seem to prove that this may be very short—under twenty-four hours.

The general opinion of veterinary surgeons is that, although epidemic diseases resembling influenza occur in horses, dogs, and cats, yet that their causation is different to that of human influenza, and that the disease is not communicable from men to animals or from animals to men. There are, however, others who hold the contrary opinion, and believe that the diseases are identical in men and animals, and transmissible from one to the other.

Finally, the author advocates strongly that influenza should, by Act of Parliament, be placed among the infectious diseases for which notification is compulsory.

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*Clinical Manual for the Study of Medical Cases.* Edited by JAMES FINLAYSON, M.D., Physician and Lecturer on Clinical Medicine in the Glasgow Western Infirmary ; Physician to the Royal Hospital for Sick Children, Glasgow, &c. Third Edition. London: Smith, Elder, & Co. 1891. Pp. 719.

WE welcome with much pleasure the Third Edition of Dr. Finlayson's Manual. It is, so to speak, the converse of ordinary text-books of medicine, treating, as it does, of the same subjects, but approaching them from the opposite point of view. In books on Practice of Medicine the contents are classified and divided according to the various diseases described. In the Clinical Manual, the different systems and organs of the body are taken as the groundwork, and their condition and functions in health and disease are discussed and explained at length. In a text-book of medicine the student finds an account, say, of bronchitis, with all its signs and symptoms. In the Clinical Manual he reads about the characters



of breathing, normal and abnormal, the varieties of cough, the characters of sputum, and the modes of making a microscopic examination of it, of the methods of making a physical examination of the thoracic organs, pulse, urine, &c., &c.

Many matters, too, which are not very fully described in books on medicine, are here fully discussed; there are a number of useful tables showing the average weight and height of children of different ages; there is a chapter on Electrical Instruments in Diagnosis, in which will be found an account of the various kinds of electrical batteries and their appropriate uses; an account is given of the Physiognomy of Disease; and many hints are given which the student will find useful in examining cases.

We consider that the Manual fulfils admirably the author's design—viz., "to aid students in the actual study of their cases, by supplying details of the methods followed in clinical work, along with indications of the significance to be attached to various symptoms." No student, and, we may add, no practitioner who desires to set about his work in a thorough and scientific manner will regret having purchased this volume.

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#### *MEDICAL DIARIES AND VISITING LISTS FOR 1892.*

1. *The A.B.C. Medical Diary and Visiting List.* 1892. London: Charles Letts & Co., and Burroughs, Wellcome, & Co.

2. *Letts's Medical Diary for the Year 1892.* London: Cassell & Company.

1. MESSRS. BURROUGHS, WELLCOME, & CO., have just published their A.B.C. Medical Diary and Visiting List for 1892, which is very similar to the diary issued by that firm for many years past. Columns have been added to the weekly diary, in which the fees due by each patient can be inserted. It is claimed for this addition that it is "important," as enabling the medical practitioner to state at once the amount due and receive payment. To us this addition seems to be of doubtful taste, but perhaps it will work better than we think.

Another improvement in the diary is the pattern of tuck now adopted. The whole of the flap is inserted in the pocket, and so cannot become torn. The edges of the book also cannot be crumpled.

This diary contains considerably less printed matter than the

edition of 1891, and so is less bulky and more portable. Forty pages of very tough but thin paper at the beginning of this very neat pocket-book contain an immensity of valuable and wonderfully condensed information, including an index of remedies and a posological table.

2. Letts's Medical Diary is longer but narrower than the A.B.C. Diary. It is equally condensed, but contains a great deal of useful information, notwithstanding. We think the insertion of advertisements in the middle of the pages containing information is a mistake. It makes reference to the contents a matter of some difficulty. On the whole, however, we have to express our hearty approval of this neat and handy diary.

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*The Ophthalmoscope. A Manual for Students.* By GUSTAVUS HARTRIDGE, F.R.C.S., &c. With 63 illustrations. London: J. & A. Churchill. 1891. Pp. 123.

AFTER a careful perusal of this volume we have come to the conclusion that it possesses no special advantages over similar works intended for the same purpose—namely, as a pocket-book of reference for use in the out-patient room. Indeed, we have already questioned the necessity for the existence of such works, in view of the numerous small and portable hand-books on ophthalmology as a whole.

Chapters I., II., and III. are devoted to preliminary optics, the theory and use of the ophthalmoscope, retinoscopy, &c., while the remaining chapters deal with the normal and pathological appearances of the fundus of the eye, including one on the examination of the anterior parts of the eyeball by focal illumination. The latter portion is simply and clearly written; the best chapters, perhaps, being those on the optic nerve and retina. The first part is not so satisfactory, many of the explanations, although obvious to anyone possessing a slight knowledge of optics, are not sufficiently precise and explicit for students. We may take a few instances. One occurs on the very first page. It is stated that "Rays of light diverge—the nearer the source of the rays the more they diverge;" this is evidently not true in an absolute sense, the angle of divergence between any two rays is always the same. What is implied is, that if rays impinge on a given surface, the angle formed by the extreme outer rays is greater the nearer the surface is to the source of light.

On page 7 we read that “the *amount* of refraction is the same for any medium, at the same obliquity, and is called the index of refraction; air is taken as the standard and is called 1.” This statement gives a very hazy notion of the real meaning of a refractive index. We could point out several other examples, but the above will suffice. There are also a few instances of omissions—*e.g.*, on page 15 spherical aberration is mentioned without any explanation of its meaning. On page 21 the reason why rays entering the eye return to the source of origin is not given, nor is the reader referred back to it. The movement of the vessels, as seen with the ophthalmoscope, in myopia and hypermetropia is not fully explained.

An appendix which occupies the three last pages gives a *resumé* of the proper routine to be adopted when examining an eye. The book is remarkably free from misprints, but “Galezowski” appears twice as “Galizowski.”

*Differences in the Nervous Organisation of Man and Woman, Physiological and Pathological.* By HARRY CAMPBELL, M.D., B.S.  
London: H. K. Lewis. 1891. Pp. 383.

THIS most interesting and fascinating work is divided into three parts. The first treats of the evolution of sex. The following is the account of how the sexes came to be separated:—“Suppose that in the evolutionary career of a given species a stage has been reached at which, while the organism still remains hermaphroditic, the female generative system is fairly complex; then given an individual varying in such wise that the female generative system is better developed, and the male generative system not so well developed as in an average member of the class, such an individual will stand a better chance of leaving a numerous progeny than the average member. And, similarly, an organism possessing the male generative system more developed than the female will be at an advantage over others as regards its capacity for fertilising. According to the laws of heredity, as limited by sex, their respective characters will tend to be transmitted respectively to certain individuals among the offspring, some developing more of the female, others more of the male sexual character. It is further evident that those of the offspring in which the sexual disparity is greatest will stand the best chance of leaving a numerous progeny to inherit their sexual

peculiarities ; and thus it happens that with each generation the female element will become more pronounced in one set of individuals, the male in another, until an element in each organism being finally eliminated altogether the sexes become quite distinct."

As regards the all-important question of the inheritability of somatogenetic characters no decided opinion is given ; but the author inclines to agree with Weismann, and to deny such inheritance. That blastogenetic characters are inherited there can be no doubt ; but how far these are influenced by the environment is not quite clear. Weismann believes that effects produced by the environment are inheritable, but that the change thus wrought takes no part in evolution. Dr. Campbell, however, maintains that distinct pathological conditions may be thus induced, and that the tendency to disease may thereby accumulate from generation to generation.

The views of Gidder and Thompson that the male organism is more katabolic and the female organism is more anabolic, that the former is characterised by the expenditure of energy, the latter by the storage of energy, are fully considered, and the contrast is regarded as most important and having considerable pathological significance, although it cannot be taken as expressing the primary and fundamental sexual difference.

In the second part, which is "chiefly concerned with the pathological application of conclusions arrived at in Part I.," we would notice as more than usually interesting the chapters on woman and undeveloped man, and those on the monthly rhythm. In the latter it is argued that a monthly period or cycle is common to both men and women, and that the actual occurrence of the menstrual flux is only one stage of the cycle, just as new or full moon is of the cycle in which the moon completes her orbit around the earth.

The third part is psycho-physiological. In this the chapters on the varieties of male will are of great interest. These varieties are divided into four groups:—

1. The form in which compound mento-motor action tends to approximate to simple mento-motor action.

2. That in which no one impulse to action is able to retain the permanent mastery—*i.e.*, vacillation.

3. That due to the peculiar strength of sense over motion of the nature of a fascination.



4. That in which coherent thought is impossible, the individual being incapable of realising in idea any definite course of action.

The entire work is, of course, mainly speculative, but it is full of ingenious and suggestive matter, and is evidently the outcome of much thought and observation. It is written in a charmingly easy and unaffected style, free from obscurity or pedantry. It is a volume which, if once taken up, will scarcely be laid down until it is finished.

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*An Introduction to Human Physiology.* By AUGUSTUS W. WALLER, M.D. London: Longmans, Green & Co. 1891. Pp. 612.

IN this work we have the latest handbook of Physiology for the use of medical students. It is one to which we can afford the highest praise, and we would say that, in our opinion, it is, for the class for which it is written, the best book on Physiology in the language.

The division of the subject is into two parts. Firstly, the phenomena of Nutrition—including blood and circulation; respiration; digestion; renal excretion and food, nutrition, and excretion; and animal heat.

Secondly, the phenomena of Excitation—including the peripheral nervous system; muscle; animal electricity (treated in a chapter by itself); light and vision; sound and hearing, and the other senses; and the central nervous system.

In an appendix is a short sketch of Embryology, and an outline of physiological chemistry, together with tables of weights and measures.

There is a pretty full bibliography given at the end of the volume, and the copious reference to recent papers will be found most useful by senior students or others wishing to extend their knowledge beyond the limits of a text-book. Finally, there is a good index.

At the head of each chapter is placed a very full table of its contents. This is intended to serve not only as a summary or syllabus, but as a means by which the student can examine himself.

The chapters dealing with difficult subjects, and which may be omitted by the junior student, are marked, so that the selection of parts to be studied in a first reading is easily made.

Throughout, the work is written in a clear, pointed style, free from affectation or obscurity. The facts are accurately stated, and

the information is all up to date. The text is abundantly illustrated, not by the histological drawings, which occupy such an undue amount of space in most students' text-books, but by drawings of instruments, curves, and such diagrams and figures as are distinctly physiological rather than anatomical. The type is large and clear, and the paper and binding all that can be desired.

On the whole, this is a work we would strongly recommend to all our readers, who require within a reasonable compass a thoroughly reliable and complete view of modern Physiology. We congratulate Dr. Waller on the production of the volume, which will, we doubt not, add to the deservedly high position which he already holds among contemporary physiologists.

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*The Human Figure : its Beauties and Defects.* By ERNST BRÜCKE, Emeritus Professor of Physiology in the University of Vienna, &c. With a Preface by WILLIAM ANDERSON, Professor of Anatomy to the Royal Academy of Arts, London. With 29 Illustrations by Hermann Paar. London: H. Grevel & Co. 1891. 8vo. Pp. 188.

PROFESSOR BRÜCKE has clothed with anatomical learning Hamlet's famous reflection on man :—"What a piece of work is a man! how noble in reason! how infinite in faculty! in form and moving how express and admirable! in action how like an angel! in apprehension how like a god! the beauty of the world! the paragon of animals!" He has added to the poet's enthusiasm of mere beauty the sculptor's knowledge of bone and muscle which brings into prominence every line and curve of physical grace and strength. He has provided for us an anatomical key to the forms and proportions of paintings and statuary which have come to be recognised as embodying the highest point of physical development. The author does not single out as the artistic type that which in many instances anatomy would teach us to be the normal one, but allows to the artist ample scope to avail himself of any slight deviations which may present a more pleasing outline or add to the symmetry and grace of his delineation. We cannot single out the numerous points of interest touched upon by Professor Brücke. Suffice to say it will be found to afford much instruction to those who are not merely students of art, but to all those who care to see the ghastly details revealed by dissection clothed, yet not concealed, by the skill of the painter's brush or of the sculptor's chisel;

to realise Coleridge's ideal of "the sublime of man"—"to know himself, part and proportion of a wondrous whole." A word of praise must be added for the beautiful specimens of wood engraving by Hermann Paar, mostly from well-known sculptures or paintings, which adorn the volume.

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*Nerve Prostration and other Functional Disorders of Daily Life.*

By ROBSON ROOSE, M.D., &c. Second Edition. London : H. K. Lewis. 1891. Pp. 671.

FUNCTIONAL disorders, so-called, or as we should say diseases whose real nature is unknown or misunderstood, are the happy hunting ground of therapists and speculators. The pursuit only, while it does not contain much that is new or original, gives a plain straightforward account of the symptoms of each of the conditions described without too much theoretical speculation about anabolism and katabolism, and does not unduly multiply the therapeutic agencies to be employed in treatment.

The book will, no doubt, be found useful by many practitioners, although to the scientific physician the effect it produces is not satisfactory.

It is divided into an introduction and four sections. In the introduction it is fairly stated that no sharp line can be drawn between functional and organic diseases, and that many diseases formerly regarded as functional are now known to have an organic basis.

The first section treats of the functional disorder of the nervous system, including neurasthenia, hysteria, epilepsy, neuralgia, headache, hypochondriasis, toxic neuroses, and others.

The second section is on the functional disorders of the organs of circulation, and deals with palpitation, syncope, neurasthenia of the heart, characterised by weakness of the heart with increased excitability, and angina pectoris.

In the third section the functional disorders of the respiratory organs are considered. These include laryngismus stridulus, asthma, and hay fever. It seems rather a straining of terms to call the last a functional disorder.

The fourth section deals with the functional disorders of the organs of digestion. This is, to our mind, the most unsatisfactory section. We find chapters on dyspepsia, nervous dyspepsia, con-

stipation, diarrhœa, and other conditions which are merely symptoms of different and altogether distinct conditions.

There is no doubt that many useful hints may be got from the perusal of this book, although, as we have said, we do not look on it as an example of the highest class of medical literature. The style is clear and easy to read, and the manner in which the work is brought out leaves nothing to desire.

*Refraction of the Eye, its Diagnosis and the Correction of its Errors.*

By A. STANFORD MORTON, M.B., F.R.C.S. Eng. Fourth Edition. H. K. Lewis. 1891.

WE gladly welcome a new edition of this little work on Refraction. As we have had occasion to notice each of the former editions, we need not do more than state that we have no reason now to reduce the large share of praise which we bestowed upon the earlier editions. The book though small, only 69 pages, puts clearly all the most important facts concerning the subject with which it deals. In the present edition the whole book has been revised, and in part re-written, but no very essential change in its arrangement and scope has been made.

We still regard it as one of the very best of the small works on Refraction.

QUASSIN.

SS. OLIVERI and DENARO having obtained quassin in a pure and crystalline state, thus describe it:—Quassin occurs in fine needle-like colourless crystals of the monoclinic order when formed from a warm menstruum. On cooling, the crystals tend to form an amorphous mass, which is very soluble in alcohol, acetic acid, and chloroform, but sparingly so in ether. Exposed to the air, the solution becomes yellowish. The glucoside is neutral in reaction; does not reduce Fehling's solution; gives a white precipitate with tannic acid, and gives no colour test with perchloride of iron. It dissolves in concentrated alkaline solutions, but not in solutions of the carbonates. The chemical is given as  $C_{10}H_{22}O_5$ , or  $C_{32}H_{44}O_{10}$ .—*Gazzetta Chimica Italiana*, No. 165, May, 1891. [The chemical formula given above differs from that ascribed to the glucoside by British writers, who give the formula as  $C_{10}H_{12}O_3$ . Attfield, however, accepts the formula of SS. Oliveri and Denaro].



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#### SECTION OF OBSTETRICS.

President—ANDREW J. HORNE, F.R.C.P.I.

Sectional Secretary—W. F. KIDD, M.D.

*Friday, November 27, 1891.*

Dr. ATTHILL in the Chair.

#### *President's Address.*

THE PRESIDENT having returned his warmest and best thanks to the Fellows of the Royal Academy of Medicine for having elected him as President of the Section of Obstetrics, read an Address on Cæsarean Section. His firm conviction was that there are many infants annually sacrificed who might be saved if the medical profession would recognise the fact that a majority of such cases could be saved by prompt surgical interference. He gave a short *resumé* of the history of the operation, and did not consider it required more than ordinary surgical skill for its performance. He laid special stress on the treatment of the uterine wound, as advocated by Säger, of Leipzig, and paid a tribute of respect to Lister, as having restored the Cæsarean section from the limbo to which it was consigned to its proper place in the surgical art, by means of antiseptics. On the early recognition of pelvic deformity depended the success of Cæsarean section.

#### *Specimens Exhibited.*

DR. W. J. SMYLY showed specimens of myoma uteri removed from six different patients, which illustrated the chief varieties of such growths.

Case I. was a subperitoneal fibroid with a long pedicle, somewhat larger than a foetal head. It had been removed from a patient in the

sixth month of pregnancy. The pedicle was transfixed and secured with a Staffordshire knot, and the peritoneum stitched over the raw surface. Patient recovered.

CASE II. was also a subperitoneal myoma, but senile. The primary object of the abdominal section was the removal of a large multilocular ovarian tumour, but the myoma, which was as large as a closed fist, was wedged down in Douglas' pouch, and was causing pressure-symptoms, and was therefore removed at the same time. An elastic ligature was placed below the tumour, which was removed by a wedge-shaped incision, and the edges brought together by suture. The patient died from pulmonary embolism on the third day.

In the next three cases the uterus was removed by supra-vaginal amputation, the stump being treated extra-peritoneally.

CASE III. first came under observation three years ago with a sloughing fibrous polypus in the vagina, but she absolutely refused to have it removed. Six months later, however, this was accomplished by another operator, but she nearly lost her life from pyæmia. She recovered, however, but was subsequently attacked with diphtheria, followed by paralysis of the soft palate. The abdomen had then enlarged to the size of a full-time pregnancy. In July of the present year (1891) she came into the Rotunda Hospital in a deplorable condition; the uterus reached to a handsbreadth above the umbilicus, and a sloughing polypus occupied the vagina and protruded from the vulva, causing painful expulsive efforts and a most offensive discharge. She was greatly reduced by hæmorrhage, septic fever, and morphia. Her temperature was 104° F. The day following her admission the polypus, which weighed 1½ lbs., was removed, but as her temperature continued high the uterus was also removed two days after. The operation was rendered very difficult by firm peritoneal adhesions, and the ovaries, which were as large as hen's eggs, were crossed behind the uterus embedded in inflammatory exudation, and filled with pus. The ovaries having been removed, the uterus was drawn out and the abdominal wound closed and thoroughly protected before it was amputated. The stump was well cauterised with the actual cautery and dressed with tannic and salicylic acids. The patient made an afebrile recovery.

Cases IV. and V. were intra-mural myomata. The first multinodular, the second of the soft uninodular variety; both made good recoveries.

CASE VI. was a myoma the size of an ostrich-egg, which had developed at the back of the uterus in the cellular tissue beneath the peritoneum, and had caused so much distress as to necessitate its removal. When the tumour was exposed the peritoneum covering it was laid open by a crucial incision and the growth enucleated. The cavity was drained through the vagina, and the peritoneum closed over it by continuous catgut suture, so as to exclude it completely from the peritoneal cavity. This patient also made an uninterrupted recovery.



MR. M'ARDLE asked Dr. Smyly if catch forceps were used during the efforts at securing the pedicle of the ovarian tumour, as the contusion of the veins thus brought about might account for the pulmonary embolism which caused death. Mr. M'Arldle had frequently seen the femoral and axillary veins so contused by forceps that clotting occurred at the points of pressure, owing to injury of the inner wall. Possibly compression of the stump caused in this case pelvic phlebitis, otherwise it is difficult to account for the result.

DR. SMYLY replied that catch forceps had not been used, but that the pedicle had not been compressed with catch forceps, but by the elastic ligature.

DR. LANE exhibited a pin about two inches in length, which he had removed from the bladder of a young lady. Patient was seen on the day the pin escaped into bladder, and was with ease felt by examination per vaginam. The head was resting against posterior wall of bladder and to right of uterus, the point being directed forwards and to left side of orifice of urethra. Owing to certain reasons, the attempt to remove the pin had to be postponed for three days, and when patient was under ether the pin was found to be lying transversely and some distance above the inner orifice of urethra. Previous to any examination, vagina was washed out, and prior to attempting to remove pin the bladder was injected with water. The pin was caught and withdrawn. There was a very slight amount of blood in urine that day; none afterwards, but urine was turbid. On fifth day patient got a severe rigor and got pyelitis of both kidneys. Cause not quite certain, as temperature and pulse had been perfect, unless it was due to cold, as patient had the day previously been sitting up in bed at an open window, without much covering. Symptoms gradually subsided, and patient made a perfect recovery.

DR. MORE MADDEN was certain that the Academy would appreciate the intent of Dr. Lane's communication both as regards the comparative rarity of the accident described and the efficacy of the treatment adopted in the case just referred to. The bladder has in many instances been found the receptacle for a most extraordinary and heterogeneous assortment of misplaced articles, an occurrence of which several instances were long since related by the late Sir Benjamin Brodie, as well as by Sir Philip Crampton, and more recently by Dr. Barton, of this city. Dr. More Madden on a former occasion had exhibited a piece of slate-pencil which he removed from the bladder of a young female.

#### *Two Cases of Cæsarean Section.*

DR. W. J. SMYLY said—I have the honour of exhibiting to you two patients with their infants, upon whom I performed the operation of Cæsarean section in the Rotunda Hospital. They present one feature only in common—namely, such an extreme degree of pelvic deformity that

the birth of a living child by any other method than abdominal section would be impossible. In other respects they present marked contrasts. The one is a well-marked example of a rare deformity, the result of a kyphosis in the lower lumbar and upper sacral regions of the spine, in which the narrowing is most marked in the transverse diameters, and especially at the pelvic outlet. The other is an example of the generally contracted flat rachitic pelvis, in which the narrowing is most marked in the conjugate diameters, and especially at the pelvic brim.

CASE I.—Mrs. H., aged thirty, was sent to the Rotunda Hospital by Dr. Alfred Smith, of St. Vincent's Hospital, when in the fourth month of her second pregnancy. Her first child had been delivered with the perforator and cranioclast in the hospital in 1889. The patient was of small stature, 4 feet 5 inches in height, with a well-marked kyphosis in the lumbar region. She was so much bent forwards that the thorax was overlapped by the wings of the ilia. She had no recollection of the illness which produced this deformity, but her mother had informed her that she had been treated for spinal disease in St. Vincent's Hospital when an infant. The *alæ* of the ilia were flattened outwards, the distance between the anterior superior spinous processes being 26 cm., and the most distant parts of the crests 28 cm. The symphysis pubis protruded in a beak-like process resembling that of a cordiform pelvis, and there was marked narrowing of the pubic arch. There was considerable narrowing of the outlet, especially of its transverse diameter, the ischial tuberosities being approximated to within 5 cm. (2 inches) of each other; the promontory of the sacrum was out of reach. After consultation with my assistant, we informed the patient that a living child could only be obtained by abdominal section, and to this she readily assented.

Labour set in at full term on Sunday, the 7th of June, and I proceeded to operation about ten o'clock in the morning. She had then been some hours in labour, and the os was about two-thirds dilated; the head was well down in the pelvis, but the membranes were unruptured. The abdomen having been opened by a free incision, the uterus was drawn out, and an elastic ligature placed around the cervix. It was then opened, the membranes sutured, and the *fœtus* extracted. The placenta and membranes having been carefully removed, the interior of the uterus was well scrubbed with a strong solution of carbolic acid. Although I adopted this precaution in both my cases, I now think it had better be omitted, because the interior of the uterus is—except under exceptional circumstances—quite aseptic, and the process occupies time and depresses the tissues, so as to render them more liable to a later infection; and I find that, in Dr. Murdoch Cameron's cases, although it was omitted, the results were eminently satisfactory. The patient made an afebrile recovery, and nursed her infant.

CASE II.—Mrs. G., aged twenty-four; a primipara; had evidently

suffered from rickets in early infancy. The shape of her head and thorax, her large joints and bow-legs, as well as the pelvic deformity, testifying to the fact. The distance of the anterior superior spinous processes of the iliac crests was  $22\frac{1}{2}$  cm., and the most distant points of the crests 23 cm. The true conjugate of the brim was only 6 cm. ( $2\frac{1}{4}$  inches). When I was called to the patient she had been forty-eight hours in labour, and violent efforts had been made to deliver with forceps. Under these conditions I was at first disposed to resort to the perforator, as such misdirected efforts greatly diminish the prospects of success in abdominal section; but considering that strict antiseptic precautions had been maintained throughout, and that the foetal heart was beating strong and regularly, I came to the conclusion that the more conservative proceeding was still justifiable. I then performed Cæsarean section as in the former case. After extraction a deep scalp wound was found on the child's head, and another contused wound upon its neck, resulting from the pressure of the forceps, both of which suppurated, and have left permanent scars. The mother's convalescence was retarded by suppuration, a large quantity of pus escaping from the lower end of the wound when the sutures were removed on the eighth day. It healed, however, by granulation, and she left the hospital with only a small sinus remaining, which ultimately closed after the discharge of three sutures.

DR. MORE MADDEN.—No subject of greater practical importance could probably be brought before this Section of the Academy than that which has been introduced by the President's Address and in Dr. Smyly's paper. The advance of modern midwifery has been most strikingly exemplified in the changed position in obstetrics in favour of craniotomy and Cæsarean section. Five and twenty years ago the former was invariably resorted to in those cases of difficult or obstructed labour, in which a living child might now be delivered from a living mother with safety to both. Dr. Murdoch Cameron, of Glasgow, as well as Dr. Smyly and others, had abundantly demonstrated the possibility, and with due precautions the safety in proper cases, of the Cæsarean section. The necessity for choosing between craniotomy on the one hand, and Cæsarean section on the other, does not, however, so often actually arrive as some may suppose. In twenty years' midwifery experience Dr. More Madden had never met with any case justifying resort to craniotomy, and in only one instance had he found Cæsarean section necessary. It is a great satisfaction to one who like himself had long maintained that opinion, to find that most of the leading obstetricians of the present day now probably agreed that child-destroying operations should be eliminated from midwifery practice, and that the only question, in extreme cases of difficult labour, should be which one of the two suggested child-saving operations—viz., Cæsarean section or Porro's operation, should be resorted to.

*Dystocia due to a Cyst in the Liver of a Fœtus.*

DR. BAGOT read a paper on "A Case of Distocia due to a Cyst in the Liver of a Fœtus." He considered the case of extreme interest from a pathological as well as from an obstetrical point of view. Records of cases where congenital cysts of any size had been found in the liver were very rare, as were also records of such, or indeed any, tumour of the foetal liver causing dystocia.

The history of the case from which this specimen had been taken was as follows:—As Senior Assistant Physician to the Rotunda Hospital he was summoned to the assistance of two of the students of the hospital who were in attendance on a woman in the extern maternity department. It was her second pregnancy. Her first had terminated normally and at full term. She had been in labour thirteen hours. The head of the child had been born immediately on the arrival of the students; but the body was delayed, and though they had tried both expression and traction they were unable to deliver it. Dr. Bagot accordingly went to their assistance, and found, as they had reported, the head somewhat smaller than normal, completely born, and the child apparently dead some little time. The woman stated that she was about  $8\frac{1}{2}$  months pregnant. Her body was covered with a papular rash, apparently syphilitic. Dr. Bagot then administered chloroform, and proceeded to palpate her abdomen. He found the uterus much larger, and more tense than was usual at full term, though some of the liquor amnii must have escaped on the rupture of the membranes. On percussion a very distinct fluctuation thrill could be felt.

The back of the child could with difficulty be mapped out, looking forward, and towards the left in the first position. It at once occurred to Dr. Bagot that he had to deal with a case of Hydrops Amnii, complicated by some abnormality of the foetal abdomen, such as ascites or an ovarium tumour, &c. Accordingly, after a thorough disinfection, he passed his hand up posteriorly along the anterior surface of the child, and on reaching the uterine cavity, which still contained an abnormally large quantity of liquor amnii, he found, in accordance with his expectations, that the abdomen of the fœtus was enormously distended. He perforated the child's abdomen close to the xiphoid cartilage by means of a Smellie's scissors, upon which a yellow fluid poured out, mixed with the liquor amnii, which then came freely away. The child, a male, was then easily delivered, the placenta following almost immediately. After stitching up the hole made by the perforation, Dr. Bagot injected the abdomen till it almost assumed its original tension, and found that its capacity was 60 oz.

He then made the following measurements:—Length of fœtus, 45 cm.; girth of umbilicus, 59.75 cm.; distance from sternum to pubes, 39.5 cm.



On opening the abdomen he found that the chief abnormality existed in the liver. The other organs, with the exception of the kidneys, which were very small, were apparently normal, as far as could be made out from a hurried examination of them *in situ*; for the father having returned, demanded the restitution of the body without any further examination. Dr. Bagot, however, succeeded in removing the abnormal viscera for examination, which showed the following:—

*Liver.*—*Right Lobe* comparatively normal; perhaps rather small for a full-term fœtus. On its under-surface near the right edge was a small lobe marked with parallel ridges. The gall bladder was absent, and the lobus quadratus consequently not marked off. Hepatic artery and vena portæ normal. Hepatic duct present, rather small. It was not possible to trace a branch to the left lobe with any certainty, but it was probable that the left duct had been torn from its connections on account of the haste with which the autopsy had to be made. The duodenal end of the duct was not observed.

*Left Lobe.*—The whole left lobe was converted into a large simple cyst capable of holding 48 ounces of fluid. It was smooth on its surface and marked by ramifications of vessels and ducts. The inner surface was also smooth, except that it was covered by a whitish film which could easily be stripped off. The fluid from the cyst having all drained away at the time of perforation could not be examined. Histologically the hepatic tissue was normal. The wall of the cyst was formed of two layers of about equal thickness. One next the cavity of the cyst consisted of a rather dense fibrous connective tissue; and outside this, over the greater part of the cyst wall, a layer of equal thickness, consisting of hepatic tissue. Where this was absent, its place was taken by large vessels and ducts. Near the junction of the two layers numerous small ducts were to be seen. In no case at all did these approach the cavity of the cyst, but opened into the larger ducts mentioned above as accompanying the vessels.

No epithelium could be demonstrated on the interior of the cyst. The kidneys, though very small, were normal in structure. Dr. Bagot had been able to find records of two cases only, which in many points resembled his. The first, reported by Witzel (*Centralblatt für Gynäkologie*, No. 24, 1880) as a case of dystocia, due to a hemicephalous fœtus, with large cystic liver, cystic kidneys, and other malformations. It was easily delivered after perforation of the abdomen. The second case, reported by Lomer (*Virchow's Archiv*, No. 99), Dr. Bagot thought worthy of notice, from the fact that it occurred in a syphilitic child. It did not, however, cause any delay in the labour. In it the following abnormalities were present:—Obliteration of cystic and right hepatic ducts, gall-bladder collapsed and obliterated, left lobe normal, right lobe rough, convoluted, and degenerated, with cyst in it. The fœtus was macerated,

and its bones presented syphilitic lesions. Lomer considered it either primary developmental defect, or else due to syphilitic perihepatitis.

Dr. Bagot had been able to find only four cases, besides that recorded by Witzel, where dystocia had been caused by any form of liver tumour—viz., (1) Haase (*N. Z.* XI., 262); (2) Müller (Hohl, p. 286); (3) Naggereth (*Deutsche Klinik*, 1854, No. 44; *Wochenschr.* IV., 458); (4) Schlesinger (Hohl, p. 289). The first three, according to Winchel, “resolve themselves into either hepatic physconia, or a lymphatic tumour of the liver.” The tumour in Naggereth’s case was a carcinoma.

## SECTION OF PATHOLOGY.

President—C. J. NIXON, M.D.

Sectional Secretary—J. B. STORR, F.R.C.S.I.

*Friday, December 4, 1891.*

The PRESIDENT in the Chair.

### *United Fractures in Animals.*

DR. FRAZER showed:—No. 1.—Humerus of grouse, broken at lower part and united with much angular deformity and overlapping of lower fragment.

No. 2.—Wing of pheasant. Radius broken at lower third; much consolidation around seat of fracture, with spiny protuberances from callus.

No. 3.—Pintail duck. Fracture of both wing bones radius, and ulna, with overlapping

No. 4.—Fracture of leg of hare, with considerable oblique displacement of the lower fragments.

These injuries, probably all due to gunshot wounds (though possibly the broken leg of hare may have resulted from some other cause), appear worth exhibiting as illustrations of the remarkable powers of healing without surgical aid or the benefits of antiseptic treatment they evince in their former owners. In every instance the union of the injured bones has resulted in a useful limb, capable of flight or locomotion.

### *Specimen of Intussusception of the Dying.*

DR. McHUGH exhibited a case in which descending intussusception of the jejunum had occurred in two places. In neither of the suscepta was there any trace of inflammatory reaction or adhesion, and both were readily reducible. The specimen was found by the exhibitor in the Dissecting Room of the College of Surgeons in a male adult subject, which was, however, already in an advanced stage of dissection. The thoracic organs had been entirely removed, and the cause of death was

not ascertainable. The intestine itself presented no signs of disease, and there was no intussusception of the ileo-cæcal valve. The case was clearly one of what is very commonly called *post-mortem* intussusception, or, more properly, intussusception of the dying, as the invaginations might be supposed to have taken place whilst the patient was *in articulo mortis*. The condition is comparatively frequently copied in autopsies of children, but as far as the exhibitor was aware was infrequent in adults. The fact that both invaginations were high up in the jejunum and descending in direction was noticeable.

DR. FRAZER mentioned that he had seen about four instances of similar intussusceptions. In one case at least four invaginations occurred. There were no symptoms during life to attract notice, and no evidences of inflammatory deposit apparent; they appeared due to irregular action of the muscular fibres, before complete extinction of movement in the dying person.

DR. McWEENEY mentioned two similar cases which he had lately met with in the *post-mortem* room of the Mater Misericordiae Hospital. They were both adults; both had died of lingering disease—one of valvular disease of the heart, and the other of pleural effusion. In neither was there any symptom indicating intussusception noticed during life; and in neither was there any reaction in the shape of either congestion or inflammation observed *post-mortem*. Orth, in his work on pathological anatomy, states that these agonal intussusceptions are met with very frequently in children who have suddenly died of brain lesions. The observations laid before the Section that evening would go to show that it was not uncommonly found in adults dying of other affections.

#### *Fibro-sarcoma of Neck of Hen.*

MR. PATTESON showed a specimen obtained from a fowl in whom the growth had been present for about a year. The tumour was about the size of a large walnut, lying in front of the windpipe, and firmly adherent to the overlying skin. It had been at one period very vascular, and bled freely when pecked at by the other fowl. The growth apparently originated in the subcutaneous tissue of the neck, and though growing backwards and involving the muscular structures, did not give rise to any pressure symptoms in the trachea or œsophagus. On section it was found to be extremely dense in consistence and of light yellowish colour, and microscopic examination showed that it was composed of very thick bundles of fibrous tissue, in the interspaces of which collections of small round cells of embryonic type were freely scattered. Its local malignancy was shown by the invasion of the muscular bundles by a small-celled sarcomatous infiltration. The appearances very closely resemble those seen in the drawing in Mr. Bland Sutton's "Evolution and Disease" of a sarcoma in a fowl (p. 237).

## SECTION OF SURGERY.

President—H. G. CROLY, President of the Royal College of Surgeons in Ireland.

Sectional Secretary—R. L. SWAN, F.R.C.S.I.

*Friday, December 11, 1891.*

The PRESIDENT in the Chair.

*Some Cases of Artificial Anus.*

MR. THOMSON read a paper on the above subject. In three case he had opened the ileum for acute obstruction, and in five the colon by anterior incision, for malignant disease. Of the former group two died, and in the second group all recovered. He pointed out that the cause of the greater mortality in so-called enterotomies was largely to be attributed to the fact that these operations were usually done in acute obstruction, so that the shock of operation was added to a profound shock already existing. In two cases he had opened the colon some days after it had been fixed in the wound, and he advocated this method where feasible. In one case he had fixed the colon by transfixing its ligament with a pin, which lay transverse to the wound, upon the abdominal wall. This operation only occupied a few minutes. He pointed out that the colon was not always readily found, but he held that the balance of advantages lay with the anterior as compared with the lumbar operation.

MR. THORNLEY STOKER expressed himself strongly in favour of the anterior operation, which for nearly every reason he conceived to be the logical one, and with due precaution, and in spite of statistics, not more immediately dangerous. He also argued in favour of the performance of colotomy in cases of cancer of the rectum as early as possible, and that the procedure should not be delayed until malignant obstruction had taken place. He stated that while it was desirable to draw the bowel thoroughly into the wound and secure it there, by the pin passed through the mesentery, as suggested by Mr. Thomson, or otherwise, he held this point as one of minor importance. It is sometimes difficult to perform this manœuvre owing to a short or fat mesentery, and it really does not matter much, as the distal lumen of the bowel always contracts, and it is found that even in cases where fluid can be injected from the rectum through the artificial anus, fæces do not pass in the opposite direction. Mr. Thornley Stoker also mentioned that he had of late adopted the practice in laparo-colotomy of securing the bowel in such a position that its distal portion is secured at the upper end of the abdominal wound and its proximal part at the lower end of the wound. When this can be done without twisting the gut—and it can generally be so done where



the convoluted sigmoid flexure is the seat of operation—the effect is to make a sort of *cul-de-sac* on the proximal side of the anus in which fæces become stored and are retained by gravitation. The fæces are then more likely to adopt the method of a periodic overflow and to avoid the more constant discharge which is often so troublesome, and which is more likely to occur when from the superior position of the proximal part of the bowel gravitation helps the continual discharge. This point he considered a novel one, and by attention to it he had added materially to the comfort of those patients in whom he had been enabled to practise it. He stated that this practice should only be pursued where it could be carried out by placing the bowel in the requisite position without any kink or twist.

MR. MYLES congratulated Mr. Thomson on the success of his cases, and commenting on them expressed some regret that Mr. Thomson had not said anything of the operation as an antecedent to the operation of rectal excision. Mr. Myles then mentioned a very successful case in which he had assisted Mr. Dwyer at Jervis-street Hospital to remove the rectum subsequently to a colotomy. Referring to Mr. Thornley Stoker's suggestion to turn the gut upside down so as to have a pouch below the aperture, he stated, in every case where the mesentery was of normal length, that part of the colon which lay between the descending colon and the new aperture descended into the pelvis so as to make a fairly effective pouch. Mr. Myles commended the use of the pin, asserting that no other method yet devised was as efficient in producing a valve so as to completely occlude the lower aperture of the bowel and prevent irritation of the cancerous sore in the rectum.

The PRESIDENT said he had performed colotomy in 15 cases by the lumbar method. No special difficulty in finding the bowel or trouble from the peritoneum. Two deaths. Several of the cases lived a year. One case was at work as Corporation labourer at end of two years; no fætor. Posterior aspect more natural than anterior. No excoriation of skin. Early operation important. Early examination of bowel with finger most important. In all cases of rectal trouble the rectum should be explored with the finger. He operated on one case which had been treated by a physician as one of dysentery before she came to the City of Dublin Hospital. Early colotomy stays the progress of the disease.

MR. WHEELER had performed both anterior and lumbar colotomy. He gave the preference to the latter.

MR. THOMSON, in reply, said he agreed with Mr. Thornley Stoker that the pin was not available in all cases. He had stated this in his paper. If the mesentery were too short to allow the bowel to be brought outside the wound, the pin ought not to be used; but where a suitable case presented, the pin was undoubtedly most simple and convenient. He thought the four sutures which he used in addition were not neces-

sary; but this was the first time he had used the pin, and he confessed that he was a little timid, and he wished to make assurance doubly sure. He had not dealt with the question of excision of the rectum in relation to colotomy, because that was a subject somewhat foreign to his paper, but it might be discussed on a future occasion. The President and Mr. Wheeler were in favour of the lumbar operation. He (Mr. Thomson) had admitted that there were some cases which were suitable for that operation; but he still held that the balance of advantage lay with the anterior method. It was certainly more convenient for the patient, who had to attend to himself, to have the opening in front, where it could be seen, and where any possible changes could be observed.

### *Nephro-Lithotomy.*

MR. MYLES read an interesting paper on nephro-lithotomy, giving a short account of a case in which he had removed by lumbar operation a large oxalate of lime calculus weighing 281 grains from the kidney of a young man in Jervis-street Hospital. The patient made an uninterrupted recovery, and was shown at a previous meeting of the Section.

Mr. Myles then entered into the consideration of the combined method so strongly advocated by Mr. Thornton, and pointed out that Mr. Thornton's contention that an abdominal incision converted doubt into certainty of diagnosis was by no means true, inasmuch as even in a typical case the hand in the abdomen might fail to find a stone in the kidney; and that being so in a typical case, how much more likely was it to occur in case of old standing inflammation with much thickening and matting of the tissues.

Again, the hand in the abdomen would often fail to find a stone, which could, perhaps, be easily struck by an exploring needle or by a sound in the pelvis.

Mr. Myles also discussed the several methods of removing a stone from the kidney when it was discovered that by incision through the pelvis of the ureter and that by incision through the kidney substance, pointing out that probably the danger of a permanent fistula in the one case and of shock and hæmorrhage in the other, were both exaggerated.

The speaker further expressed himself very strongly on the loose and unscientific way in which writers, even accomplished anatomists like Mr. Treves, use anatomical terms in connection with the kidney—at one moment describing the pelvis, correctly enough, as being part of the ureter, and then describing themselves as cutting through the “pelvis of the kidney.” Such looseness of language was most misleading.

MR. WHEELER said that he had performed nephrectomy on several occasions, but the communication only invited remarks upon nephro-lithotomy. He had shown calculi removed from the kidney of different individuals at this Society. He did not think that the abdomino-lumbar

operation was necessary should the operator be quite certain that only a calculus existed, and that further operative measures would be unnecessary. He was of opinion that it did afford some help in diagnosis; but the combined operation had other advantages. In one of his cases there was much difficulty in detecting the stone—a small one—and he had to puncture the kidney seven or eight times before the needle impinged upon it. He then incised the kidney with a narrow-bladed knife and dilated with his finger. There was no hæmorrhage. The wound healed kindly. A tube was introduced as far as the site of the wound in the kidney. He had not found it necessary to sound the kidney with a staff. The so-called pelvic incisions should be made with caution. In one of his cases the fat was very abundant; he applied a ligature and cut it off. In cases of abscess he introduced the tube into the kidney.

The PRESIDENT said, with reference to the difficulty of detecting the stone in the kidney by manipulation, he mentioned a case in which he operated by the abdominal incision, and though he expected stone, it was not discovered until the kidney was removed and a section made of the viscus. A large stone was discovered. There was a large abscess. No renal artery could be found. No urine was secreted from the time of operation, and the patient died the night of operation. He made an examination of the remaining kidney, *post mortem*, and found a large stone in it also. This case shows the difficulty of detecting stone before operation, and of knowing the state of the other kidney.

Mr. MYLES having replied,

The Section adjourned.

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## SECTION OF MEDICINE.

President—J. MAGEE FINNY, M.D.; President of the Royal College of Physicians of Ireland.

Sectional Secretary—A. N. MONTGOMERY, M.R.C.P.I.

*Friday, December 18, 1891.*

DR. ATTHILL in the Chair.

*Ichthyosis.*

DR. J. O'CARROLL exhibited a case of ichthyosis.

*Card Specimen.*

DR. M. A. BOYD showed as a card specimen the intestines, with perforation, from a case of enteric fever.

*Some Recent Aids to the Diagnosis and Treatment of Diseases of the Stomach.*

DR. H. C. TWEEDY, in a paper on Recent Aids to the Diagnosis of Diseases of the Stomach, referred to the very valuable researches of Professor Purser on the processes of digestion which he had communicated to the Academy last Session. The first mode of physical examination to which Dr. Tweedy drew attention was the "clapotement" or splashing sound; its utility was not confined to the help it might give in determining the position and size of the organ, but what was of perhaps more importance—it could give information as to the condition of the muscular layer. It was easily elicited in the epigastric region, and could, from the convexity of the lower boundary of the region in which it is audible, be differentiated from similar sounds occasionally heard in the transverse colon. Referring to another mode of examination, Dr. Tweedy records his objection to the proposal of testing the size of the stomach by the evolution within the organ of carbonic acid: the proceeding was uncertain, unreliable, and sometimes not devoid of danger. He considers this procedure, as well as that of introducing a small electric light, to be entirely superseded by insufflation, which, with obvious precautions, is both safe and satisfactory.

After referring to various contrivances for obtaining specimens of the contents of the stomach for examination, he unhesitatingly adopts the ingenious "bucket" of Dr. Einhorn, of New York; and he details the *modus operandi* whereby it can be used without causing the patient inconvenience. To guard the little receptacle against an undue proportion of mucus, he covers the open top with a film of gelatine, which will not melt till it has been a few minutes at its furthest destination. By this means the presence and amount of free hydrochloric acid and of other substances could be determined.

The question whether the percutaneous application of electricity to the abdominal walls determines peristalsis of the stomach directly or only as an effect of contraction of abdominal muscle is next discussed. The author of the paper evidently inclines to the latter view, as he describes and recommends the application of a new form of electrode devised by the inventor of the "bucket" mentioned above. It is claimed for it that it is easy to place and retain in the stomach, and perfectly under control of the operator.

MR. GEORGE FOX said that the disadvantages of Einhorn's bucket were—(1) It may be stopped by disease of the œsophagus and prevented from entering the stomach; (2) its contents may have been got in the œsophagus; (3) it will probably empty itself in the mouth; (4) it is inferior to the Abbé Spallanzini's metal capsules; and being modelled on the Abbé's capsule, Einhorn is not entitled to credit for its introduction.

DR. M. A. BORD considered that the splash symptom mentioned by Dr.



Tweedy was of all symptoms the most reliable in all forms of dilatation of the stomach, both functional and organic. That it is a common symptom in a great many of the catarrhs of the stomach which are known as dyspepsias. Functional dilatation accompanied by this symptom is a very common affection, and will be found if looked for in most cases of anæmia or chlorosis, with the characteristic left-sided pain, even where no gastric ulceration is present. Also where the ingesta of injudicious food and much fluids lead to fermentation and distension of the muscle-wall of the stomach. Distension of the stomach from an atonic condition of its muscle, is not uncommon after long illnesses. In all these cases the splash symptom is present. In organic stricture of the pylorus from either malignant disease, contracting gastric ulcer, or fibroid induration, the most characteristic symptoms of dilatation are met with, and the splash symptom most easily obtained. When dilated from organic stricture, all portions of the stomach are stretched. In functional dilatation the only part distended is the cardiac end where the muscular tissue is most abundant, showing that muscular atony in addition to the weight of fluid ingesta are the most important factors in its causation. He regarded the splash as always indicative of some abnormal condition of the stomach.

DR. TWEEDY remarked in reply—first to Mr. Foy, that however valuable might have been the discovery of the Abbé Spallanzini, 200 years ago, in obtaining by a sponge the contents of the stomach, the contents so obtained would have been of little service to him, as the diagnostic value of chemical examinations dated practically within the last ten years. He added that from *personal* experience he could state that the introduction of Dr. Einhorn's stomach bucket was attended with little or no inconvenience; and that it was not likely to empty its contents on withdrawal from the stomach, both in consequence of the consistence of the alimentary matters withdrawn, and of the small size of the opening in the bucket; but even if some of the contents escaped, one drop was sufficient for the performance of the test for hydrochloric acid with Günzburg's phloroglucin-vanillin solution. Another objection mentioned was anticipated by Dr. Einhorn, in providing a gelatine capsule for the stomach bucket, where there was a superabundance of œsophageal mucus. In the descent to the stomach no mucus could enter the bucket in consequence of the gelatine covering, and as the bucket is full when withdrawn it is impossible that any amount of mucus could displace the stomach-contents already in the instrument.

*Acute Double Pneumonia successfully treated by Bleeding and Inhalation of Oxygen.*

MR. FOY read a paper on the above subject. [It will be found at page 13.]

DR. M. A. BOYD said he was glad to hear attention called by Mr. Foy to a remedy in pulmonary congestion which we did not try in such cases as often as we might. He (Dr Boyd) had only a limited experience of oxygen in lung cases, but he had tried it and considered it a most valuable remedy in disease of the heart with degeneration. He brought forward during last Session of the Academy a case of Cheyne-Stokes' respiration with degeneration of the heart, where the improvement following the inhalation of oxygen was most remarkable, the degenerated heart strengthening and the dyspnoea disappearing after it was used for some time.

DR. C. F. MOORE and the CHAIRMAN having also spoken,

MR. FOY, in reply, drew attention to the discussion in the past on the side on which pneumonic patients should be bled—Sydenham's love of bleeding in pneumonia, and Cullen's classification of bleeding—the use of oxygen in Dublin at the beginning of the century, and Dr. Reid's paper on the value of the gas in 1817—the case of General Philip Sheridan.

*Some Recent Modifications in our Views of Enteric Fever and its Treatment.*

DR. M. A. BOYD read a paper on some recent modifications in our views of enteric fever and its treatment, in which he regarded Murchison's classic treatise on the disease as having foreshadowed all that bacteriology has since discovered regarding it. The discovery of the typhoid bacillus by Koch and Eberth had, however, narrowed the issues and enabled us to regard the disease as an acute infective one, in which light it was not previously considered. Since that discovery was made our views as to the ætiology of the disease have considerably changed, and the time had come when taking advantage of it and of the life-history of the bacillus, with its more general growth in the autumn and its prevalence during this season in drinking water and milk, as pointed out by Gaffky, to consider the manner in which it infected the intestinal glands, and to suggest some rational means for its treatment. Alluding to the want of evidence of its infective character, by its not producing the characteristic disease after inoculation experiments, Dr. Boyd pointed out that these were performed from its aerobic cultivation, but that it existed in the intestines as an anærobic bacillus, and in the former condition it might be incapable of infecting, and yet capable of doing so in its latter condition. That we were constantly taking this bacillus into our intestines by water or other media there could be no doubt, and further experiments showed that it was identical with the *Bacterium termo* which was a constant resident there. Why, then, were not all infected by it? The answer to this question lay in the fact that all bacilli were harmless until they overcome the vital resistance of the blood and tissues, in some situation weakened by injury or disease, and by growing on this weakened

part produced the ptomaines or toxins which poisoned the blood. This fact, numerous bacteriological experiments had proved. Alluding to its prevalence in the autumn, he pointed out that the constant occurrence of intestinal catarrh and gastric troubles at this period produced that amount of epithelial proliferation and lowering of the vital resistance in the intestines favourable to the invasion of the bacilli.

That this intestinal catarrh was a constant precursor and accompaniment of the disease was long ago pointed out by Murchison. Added to this, the increased growth of the bacillus on the fermenting intestinal contents, resulting from this proliferation, and the generation of their chemical toxin during growth, made the intestinal glands—always easily choked like all adenoid tissue when attacked by bacilli—fall an easy prey.

This infiltration of the glands of the intestine by the typhoid bacillus runs its course in the first fortnight of the disease from the onset of fever, and this was the normal length of typhoid from the pathological point of view. Pus-producing micrococci now invade the necrotic tissue, and from this period forward the disease is only one of septicæmia due to the toxins they produce. The character of the typhoid temperature after the second week shows this to be the case.

We must therefore regard two forms of bacteria as playing a part in the course of enteric fever—the typhoid bacillus in the early stage and the suppurative micrococci in the latter stages. This fact suggested antiseptics as the most rational method of treatment in addition to suitable diet.

The gaseous form of antiseptics seemed to him the most thorough and suitable, as it permeated the tissues and entered the blood; and of these chlorine gas held first place, administered in some alkaline medium that would part with it readily in the intestines. One-fourth of the cases treated in this manner ended their fever on the fourteenth to the sixteenth day—a result which could not be achieved by any other method.

A resolution that the discussion on Dr. Boyd's paper should be postponed until the next meeting having been proposed by Dr. N. FALKNER, seconded by Dr. C. F. MOORE, and carried,

The Section then adjourned.

## CLINICAL RECORDS.

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*Notes on Uncommon Forms of Skin Diseases.*<sup>a</sup> By R. GLASGOW PATTESON, M.B., Univ. Dubl.; Fellow and Member of Court of Examiners, Royal College of Surgeons in Ireland; Surgeon in Charge of the Skin Department, St. Vincent's Hospital, Dublin.

### VI. SYMMETRICAL GANGRENE OF THE EXTREMITIES ("RAYNAUD'S DISEASE").

THE affection of the extremities—feet, hands, ears, and tip of nose—which goes by the name of Raynaud, is still sufficiently obscure in its pathology to allow us to group it, provisionally, at least, along with those cutaneous affections which are characterised by the phenomena of necrosis; and as the features which first led to its recognition as a morbid entity are those of a limited and usually superficial gangrene affecting the most peripheral parts of the body, we may be allowed to consider it here under the heading of rarer forms of skin disease.

CASE.—Mary W., aged twenty-two, a parlourmaid, came to St. Vincent's Dispensary on the 22nd of October, complaining of a "deadness in her hands." Exactly twelve months previously she first began to suffer from "dead fingers," and up to that time her health had been fairly good. She had had one or two slight attacks of bronchitis, and five years previously had suffered from an attack of rheumatism lasting six weeks, which she believed to be rheumatic fever, but which, at any rate, had left no appreciable heart damage. About a fortnight before the first attack of numbness of the fingers came on, she received a severe shock, being left alone in the house at night and fancying she heard it being broken into by burglars. She was very nervous and felt out of sorts for about a week, but afterwards felt as well as before. At this time she was suffering from some menstrual irregularities—at first amenorrhœa, and afterwards too frequent periods with very scanty discharge—which continued for about six months, when she went under medical treatment, and has since been practically well. The history of the onset of her affection is as follows:—

About a fortnight after the shock above referred to, she awoke one morning to find one of her hands "asleep," and concluded she had been lying on it. The fingers from the first inter-phalangeal joint down were white, and quite numb and stiff, like "dead fingers," but instead of disappearing quickly this condition persisted for some little time, the natural

<sup>a</sup> Continued from the number of this Journal for September, 1891. Vol. XCII. No. 237, p. 244.



colour being then gradually restored with slight pain and tingling. At this time she had a good deal of sewing to do, and she now occasionally found her fingers getting quite numb and powerless while so occupied. Shortly after this—from about the middle of November, 1890—she suffered from constantly-repeated attacks, which came on after rising in the mornings, or in the evenings when it got cold, or during the day on washing her hands in cold water or bringing them in contact with any cold substance. The sequence of events was always the same: at first, pallor and deadness, with a numb feeling in the fingers, which, after persisting for a variable time, was succeeded by a sharp tingling pain, with swelling and lividity of the extremities of the fingers, which became of a dark, greyish-purple colour. In these attacks the pallor and numbness (“local syncope”) affected all the fingers equally from the first inter-phalangeal joint, but the second stage of pain and congestion (“local asphyxia”) affected principally the terminal phalanges, the little fingers of both hands always escaping. At this time severe darting pains about the shoulders and down the forearms often preceded the onset of the local manifestations. About the middle of December the paroxysms became much more frequent, and were excited by the least exposure to cold, so that now the fingers were constantly swollen and dark in colour, and most of the time excessively painful and tender. For the relief of this poultices were applied, with the result that, though the pain disappeared, blisters containing clear serum formed over all the terminal phalanges, except those of the little fingers, followed by desquamation of the skin and complete shedding of the nails. Small ulcerations were left after the separation of the dead skin at the tips of the fingers just beneath the free edge of the nails; and this condition remained unchanged for some time, associated with a swollen and extremely sensitive state of the fingers, so that she was quite unable for any heavy work. It was not until June of the present year that they had quite returned to their normal condition, and even during the summer attacks of local asphyxia could be at any time induced by immersing the hands in very cold water. The attacks, however, were very slight, and she was quite able for her work without any distress.

In October, however, with the onset of colder weather the pains and numbness returned, though not with the same severity as before. The fingers are now affected chiefly in the mornings and evenings, less frequently during the day; and the attacks also differ in an important particular from those to which she was formerly subject, in that the stage of “syncope” is now absent, or so transient as to escape notice, and the pain, swelling, and blueness are the features that first arrest her attention, not as previously the pallor and numbness. The fingers when I first saw her were in this condition: they seemed somewhat swollen but were not œdematous, were a peculiar slaty-blue colour, not the livid purple of

ordinary venous congestion, and were slightly painful, though sensation was everywhere normal, and they were not tender on pressure. The scars left by the previous ulceration on the tips of the index, middle, and ring fingers of both hands presented a cracked surface, and were apparently on the point of breaking down into small ulcers. There was no history obtainable of ague or hæmoglobinuria—conditions which have been associated with the affection in a certain number of cases.

While a patient in the hospital<sup>a</sup> various remedies, based on the supposed pathology of the disease, were tried by Dr. M'Hugh; but the measure of success obtained was limited and transitory. This has also been the experience of all previous observers. In order to appreciate the *rationale* of the measures adopted it will be necessary here to briefly review the pathological theories which have been put forward to explain the essential phenomena of the disease.

In Raynaud's original thesis, published in 1862, he refers the phenomena to a condition of "capillary spasm," which occurs in subjects who are "characterised by a nervous predominance." "In the simplest cases," he writes, "those in which the malady remains, if I may so say, in a rough state, the exaggerated peristaltic contraction of the capillaries drives the blood before it, the extremities become pale, withered-looking, and insensible. This is the 'dead finger.' But this phenomenon does not persist long enough for gangrene to follow. To contraction succeeds relaxation, the circulation is re-established, and everything returns to the normal state after a period of reaction more or less painful. Such is *local syncope*, in which the muscles participate in the contraction of the arterioles. *Local asphyxia* is only a more advanced condition. After an initial period of capillary spasm there occurs a period of reaction; but it is incomplete reaction. The vessels which return first to their primary calibre, or even beyond, are naturally those which present in their structure the fewest contractile elements—viz., the venules. At the moment when these are opened, the arterioles being still closed, the venous blood, which had been at first driven back into the great trunks of the dark blood system, flows again into the finest vascular divisions, and then the extremities will take on that tint, varying from blue to black, which is a certain index of the presence of venous blood in the capillary network. . . . This state may be chronic, and the spasm of the vessels may only have a limited duration, so as to return in irregular or intermittent attacks. . . . Finally, it may happen, although much more rarely, that the capillary spasm comes on all at once with an intensity and a duration altogether extraordinary. Syncope and local asphyxia succeed one another rapidly. The venous blood becomes insufficient to

<sup>a</sup> The girl was admitted, November 3rd, into St. Vincent's Hospital, under the care of my colleague, Dr. M'Hugh, and by his kindness I was enabled to show her at the Dublin Biological Club, and to obtain the notes of her case while under treatment.

nourish the parts; the colour becomes deeper and deeper; small blood-stained infiltrations take place through the walls of the venules; these walls may themselves become granular; in one word, there is confirmed *gangrene*, and *gangrene* which may go on to the fall of many ends of fingers or toes.”<sup>a</sup> In a paper, embodying subsequent researches, published in the *Archives Générales de Médecine*, January, 1874, Raynaud carried his pathological theory a step further back to the central nervous system, and sums it up as follows:—“I would say that in the present state of our knowledge, local asphyxia of the extremities ought to be considered as a neurosis characterised by enormous exaggerations of the excito-motor energy of the gray parts of the spinal cord which control the vaso-motor innervation.”<sup>b</sup> Based upon this theory was his plan of treatment by continuous descending electrical currents applied over the vertebral column, so as to act directly on the cord, one pole—the positive—being placed at the nape of the neck, and the other—the negative—over the lumbar enlargement, in combination with the application of the constant current directly to the extremities affected. In this way, Raynaud says, “the action exercised by the current in the cord appears to consist in an enfeeblement of the excito-motor power, whence there results a corresponding relaxation of the reflex vascular contractions,” and so, applied during the stage of asphyxia, the occurrence of the consecutive *gangrene* may be prevented. In a valuable paper on the subject (*Illustrated Medical News*, Vol. III., 1889, p. 178), Dr. Thomas Barlow speaks highly of the value of what may be called the “electrical bath” method of treatment during the continuance of the paroxysm. “The blue extremity may be submerged in a basin of lukewarm salt and water, and one pole may be placed in the water and the other moved about on the limb above the level of the water. The current should be rapidly reversed, made, and broken, and the patient should be encouraged to make voluntary flexions and extensive movements of the limb during the time that it is being galvanised. This should be persevered with till the colour of the extremity has become quite red. . . . The galvanism and shampooing should be done at least once a day until substantial improvement is obtained, and then this should be maintained by the patient’s own shampooing. Lamp baths, vapour baths, or, if they can be got, Turkish baths, should be tried. Diffusible stimulants are of doubtful benefit, and so are narcotics.”

The theory of vascular spasm receives a certain amount of support from two of Raynaud’s cases in which marked visual disturbances accompanied the peripheral paroxysms. In the first case “the patient affirms that his sight is good in the two eyes during the attack, but that during

<sup>a</sup> “Selected Monographs.” Raynaud on “Local Asphyxia.” New Sydenham Society’s Translation. 1888. P. 144.

<sup>b</sup> Loc. cit. P. 182.

the period which follows, and whilst the fingers return progressively to their natural colour, the sight, especially of the left eye, becomes troubled and confused, recovering at the moment when a new attack supervenes." On ophthalmoscopic examination, during the period of reaction, there were found in the left eye distinct narrowing of the central artery of the retina and of its branches near the papilla, with dilation and marked pulsation in the veins, and here and there partial contractions in the more peripheral parts of the arteries, giving them a filiform outline. In the right eye, in which vision was less affected, the same appearances were found in a slighter degree. During the stage of cyanosis the venous pulsations persisted in both eyes, while the arteries did not recover their normal calibre in all their extent but presented partial diminutions in size, giving them a beaded appearance. In the second case the facts were still more striking. This patient experienced "at the moment of the commencement of the cyanosis a notable obscuration of sight, which disappeared at the same time that the face and the hands returned to their normal colour." Examined during a severe attack it was found that at the commencement a narrowing of the arteries of the fundus oculi could be clearly seen, with a subsequent distinct widening at the moment when reaction began. The retinal veins were for the most part turgid, but showed no appreciable pulsation.<sup>a</sup>

The only other theory which has at all held the field is that the phenomena are the result of a *peripheral neuritis*. In a few cases interstitial inflammation and degeneration of nerve fibres have been found, but these cases are quite exceptional, and in the great majority of those that have been examined no nerve alterations were detected. It seems, moreover, on the face of it, incredible that phenomena so invariably paroxysmal and intermittent in their characters should be primarily due to an organic and progressive lesion of peripheral or trophic nerves; and it is possible that in these cases the nerve degenerations may have been secondary to an alteration in the nutrition of the parts dependent on the circulatory deficiencies.

Dr. Affleck has published a case in the *British Medical Journal*, December 8, 1888, in which degeneration and interstitial inflammation were found in the nerves leading to the affected part; but on the other hand, Dr. Barlow (*loc. cit.* p. 127) records a case in which the gangrene was so deep and so spreading in type that amputation in the middle third of the thigh was resorted to as a last resource, and in which, subsequent to removal, careful investigation was made into the condition of the nerves and arteries of the limb. The anterior and posterior tibial and plantar nerves were examined, and also portions of muscle with some of the smaller nerve-twigs." No morbid changes were found. "There is no obvious increase of connective tissue in perineurium or endoneurium,

<sup>a</sup> Raynaud. *Loc. cit.* P. 165.



the axis cylinders are well marked, and there is no segmentation of myelin." As regards the state of the vessels: "There is undoubtedly some thickening of the outer and middle coat, but it appears to a great extent recent." The arteries were found to be universally thrombosed but this thrombosis was regarded as recent, though the extent and characters of the clot are not definitely given. "There is a remarkable contortion and infolding in some sections of the elastic lamina, and this seems to have followed upon the shrinking of the thrombus. I think some of the nuclear overgrowth of the middle coat has been consecutive to this shrinkage. . . . The veins show some thickening of their walls, quite as much as, if not more than, the arteries." It will be seen that whatever may have been the cause of these arterial changes no neuritis at any rate was present. The account is too meagre to form any opinion on it, but it may be remarked that the appearances found correspond in a marked manner with those met with in syphilitic periarteritis, but it is stated no history of any venereal affection was obtainable.

Such discrepancies, then, existing as to the grosser lesions found in these cases, we may provisionally assume that the most probable theory is that put forward by Raynaud, viz., *the theory of arteriole spasm*. For here it may be remarked that a theory based on the occurrence of arteritis or periarteritis is just as inadequate to explain the phenomena met with, as is a theory based on the presence of a nerve degeneration or a neuritis. Either proposition lands us in a dilemma from which there is no escape. Accordingly rational treatment in the light of our present knowledge must travel on two lines: treatment applied during the occurrence of the paroxysm to relieve the vascular spasm and restore the balance of the circulation, and treatment applied during the intervals to maintain the efficiency of the peripheral circulation, and to endeavour to counteract the faulty habit which has been engrafted on the vaso-motor centre.

The method of treatment by shampooing and the electrical bath has been already referred to; both it, and the application of the constant current by brushes to the affected parts have been found useful during the acute period of the attacks. Another method which has not, so far as I know, been tried in these countries, is that of the "oxygen bath." It is applied as follows:—Each affected extremity is introduced into a chamber, made of indiarubber, which being as hermetically as possible attached to the limb above at one end, is by its other end connected with a tube and reservoir containing oxygen, by means of which from time to time fresh supplies of oxygen are admitted in the indiarubber chamber, and so allowed to bathe the asphyxiated parts.<sup>a</sup> No directions are given as to the period at which this bath is to be given, but it is presumably during the stage of asphyxia, the probable rationale being to promote by an

artificial cutaneous respiration the oxygenation of the stagnating venous blood.

*Treatment.*—The first method tried by Dr. M'Hugh was the application of cold to the cervical spine, combined with elevation of the hands and warmth. An ice-bag was applied to the back of the neck; the hands were enveloped in cotton-wool and were folded across the chest and kept fixed to the opposite shoulders. The first application was followed by an attack of blueness and pain in the fingers, which lasted for about an hour, but was followed by a period of great comfort and free from any attack, which lasted for thirty-six hours. The ice was then removed. The usual attacks followed its withdrawal; and a second application induced a similar series of phenomena, except that the preliminary stage of asphyxia did not last so long. The cold, however, it was observed, always prevented any attack of the fingers subsequently, but had no curative or preventive influence on the paroxysms. Blisters applied to the spine were next tried but without apparent effect, and she was then put upon five minim doses of trinitrin (one per cent. solution) three times a day. This treatment, combined with the local warmth, while continued was capable of preventing any attacks, and she expressed herself as feeling much better. One curious point was noticed while she was taking the trinitrin—that the tips of the fingers, which had previously desquamated, again became covered with freely-separating flakes of skin, leaving the parts underneath of a more healthy colour and consistence. But it was also found that—as, indeed, is the experience of other observers—the effect of the drug was but slight, and any exposure to cold was still liable to produce an attack. In this case the paroxysm—the period during which electricity has been found of decided benefit—was too short and the symptoms not sufficiently urgent to lead me to expect any benefit from the “electrical bath” treatment, and consequently it was not tried. The girl's condition was decidedly ameliorated while in hospital by rest, good food, warmth, and the avoidance of exciting causes, and the tips of the fingers lost to a great extent the characters and consistence of scar tissue and became softer and more pliable; but when she left hospital on November 26th it could not be said that she was a single step nearer a permanent cure than when admitted a month previously.

Disappointing as this result undoubtedly is, it will be found to be identical with those obtained by previous observers, and it may be safely said that the therapeutics of the affection equal in obscurity and unsatisfactoriness the theories that have been put forward to explain its ætiology.

# SANITARY AND METEOROLOGICAL NOTES.

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## VITAL STATISTICS

*For four Weeks ending Saturday, December 5, 1891.*

The deaths registered in each of the four weeks in the sixteen principal Town Districts of Ireland, alphabetically arranged, corresponded to the following annual rates per 1,000:—

| TOWNS     | Weeks ending |             |             |            | TOWNS       | Weeks ending |             |             |            |
|-----------|--------------|-------------|-------------|------------|-------------|--------------|-------------|-------------|------------|
|           | Nov.<br>14.  | Nov.<br>21. | Nov.<br>28. | Dec.<br>5. |             | Nov.<br>14.  | Nov.<br>21. | Nov.<br>28. | Dec.<br>5. |
| Armagh -  | 6·3          | 12·6        | 37·8        | 25·2       | Limerick -  | 40·6         | 22·4        | 19·6        | 21·0       |
| Belfast - | 29·1         | 28·5        | 34·0        | 45·6       | Lisburn -   | 17·2         | 17·2        | 21·5        | 21·5       |
| Cork -    | 39·9         | 25·9        | 30·8        | 43·4       | Londonderry | 14·4         | 27·2        | 33·6        | 22·4       |
| Drogheda  | 39·6         | 8·8         | 8·8         | 8·8        | Lurgan -    | 18·4         | 18·4        | 36·8        | 27·6       |
| Dublin -  | 28·2         | 32·3        | 29·3        | 33·8       | Newry -     | 23·4         | 15·6        | 11·7        | 15·6       |
| Dundalk-  | 7·8          | 19·5        | 11·7        | 3·9        | Sligo -     | 10·4         | 26·0        | 20·8        | 15·6       |
| Galway -  | 38·0         | 15·2        | 57·0        | 11·4       | Waterford - | 2·4          | 38·4        | 19·2        | 19·2       |
| Kilkenny  | 9·4          | 42·3        | 15·6        | 23·5       | Wexford -   | 13·5         | 36·0        | 22·5        | 36·0       |

In the week ending Saturday, November 14, 1891, the mortality in twenty-eight large English towns, including London (in which the rate was 19·6), was equal to an average annual death-rate of 20·6 per 1,000 persons living. The average rate for eight principal towns of Scotland was 28·4 per 1,000. In Glasgow the rate was 29·5, and in Edinburgh it was 26·0.

The average annual death-rate represented by the deaths registered during the week in the sixteen principal town districts of Ireland was 27·6 per 1,000 of the population (unrevised) according to the recent Census.

The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 2·4 per 1,000, the rates varying from 0·0 in eleven of the districts to 5·2 in Sligo—1 of the 2 deaths registered in that district having been caused by enteric fever. Among the 143 deaths from all causes registered in Belfast are 1 from measles, 1 from scarlatina, 6 from whooping-cough, 1 from simple continued fever,

5 from enteric fever, and 6 from diarrhœa. The 57 deaths in Cork comprise 1 from diphtheria and 1 from enteric fever. The 29 deaths in Limerick comprise 1 from whooping-cough and 2 from diarrhœa.

In the Dublin Registration District the registered births amounted to 139—75 boys and 64 girls; and the registered deaths to 192—100 males and 92 females.

The deaths, which are 18 over the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 28·8 in every 1,000 of the population. Omitting the deaths (numbering 4) of persons admitted into public institutions from localities outside the district, the rate was 28·2 per 1,000. During the first forty-five weeks of the current year the death-rate averaged 25·1, and was 2·0 under the mean rate in the corresponding period of the ten years 1881–1890.

The number of deaths from zymotic diseases registered is 21, being 12 under the number for the preceding week and 4 below the average for the 45th week of the last ten years. The 21 deaths comprise 1 from influenza, 5 from whooping-cough, 2 from simple continued and ill-defined fever, 4 from enteric fever, 4 from diarrhœa, and 2 from erysipelas.

The number of cases of enteric fever admitted to hospital is 25, being a decline of 13 as compared with the admissions for the preceding week. Twenty-five enteric fever patients were discharged, 3 died, and 188 remained under treatment on Saturday, being 3 under the number in hospital on Saturday the 7th.

The hospital admissions include, also, 5 cases of scarlatina and 2 cases of measles, but no cases of typhus were received. Ten cases of scarlatina, 3 of measles, and 3 of typhus remained under treatment in hospital on Saturday.

Deaths from diseases of the respiratory system amount to 43, being 6 in excess of the average for the corresponding week of the last ten years and 8 over the number for the week ended November 7. The 43 deaths comprise 26 from bronchitis, 10 from pneumonia or inflammation of the lungs, and 3 from pleurisy.

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In the week ending Saturday, November 21, the mortality in twenty-eight large English towns, including London (in which the rate was 20·1), was equal to an average annual death-rate of 20·7 per 1,000 persons living. The average rate for eight principal towns of Scotland was 31·2 per 1,000. In Glasgow the rate was 34·4, and in Edinburgh it was 28·6.

The average annual death-rate in the sixteen principal town districts of Ireland was 28·7 per 1,000 of the population (unrevised) according to the recent Census.

The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 2·8 per 1,000, the rates varying from 0·0 in eight of the districts to 6·3 in Armagh—1 of the 2 deaths from



all causes registered in that district having been caused by diarrhœa. Among the 140 deaths from all causes registered in Belfast are 1 from measles, 2 from scarlatina, 5 from whooping-cough, 3 from diphtheria, 5 from enteric fever, and 3 from diarrhœa. The 37 deaths in Cork comprise 1 from whooping-cough, 1 from enteric fever, and 2 from diarrhœa. The 17 deaths in Londonderry comprise 1 from diphtheria and 2 from diarrhœa.

In the Dublin Registration District the registered births amounted to 162—71 boys and 91 girls; and the registered deaths to 226—108 males and 118 females.

The deaths, which are 48 over the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 33·9 in every 1,000 of the population. Omitting the deaths (numbering 11) of persons admitted into public institutions from localities outside the district, the rate was 32·3 per 1,000. During the first forty-six weeks of the current year the death-rate averaged 25·3, and was 1·8 under the mean rate in the corresponding period of the ten years 1881–1890.

Twenty-four deaths from zymotic diseases were registered, being 4 over the average for the corresponding week of the last ten years, and 3 in excess of the number for the week ended November 14. They consist of 1 from measles, 1 from typhus, 3 from whooping-cough, 1 from cerebro-spinal meningitis, 12 from enteric fever (being 8 over the number from that disease for the preceding week, but 2 under the number for the week ended November 7), 3 from diarrhœa, 1 from dysentery, and 2 from erysipelas.

During the week ended November 7, 38 cases of enteric fever were admitted to hospital. In the following week the admissions fell to 25, and this week they declined to 22, being the lowest number of admissions for any week since that ended October 3. Thirty-seven enteric fever patients were discharged, 3 died, and 170 remained under treatment on Saturday, being 18 under the number in hospital at the close of the preceding week.

The hospital admissions for the week include, also, 5 cases of measles and 1 each of scarlatina, but no cases of typhus were received. Seven cases of measles, 7 of scarlatina, and 2 of typhus remained under treatment in hospital on Saturday.

Deaths from diseases of the respiratory system, which had risen from 35 in the week ended November 7, to 43 in the following week, further rose this week to 58, or 19 over the average for the corresponding week of the last ten years. The 58 deaths comprise 39 from bronchitis and 14 from pneumonia or inflammation of the lungs.

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In the week ending Saturday, November 28, the mortality in twenty-eight large English towns, including London (in which the rate was 19·9),

was equal to an average annual death-rate of 20·5 per 1,000 persons living. The average rate for eight principal towns of Scotland was 31·7 per 1,000. In Glasgow the rate was 30·8, but in Edinburgh it was as high as 35·3.

The average annual death-rate represented by the deaths registered in the sixteen principal town districts of Ireland was 29·6 per 1,000 of the unrevised population, based on the Census of 1891.

The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 2·5 per 1,000, the rates varying from 0·0 in nine of the districts to 10·4 in Sligo—the 4 deaths from all causes registered in that district comprising 2 from diphtheria. Among the 167 deaths from all causes registered in Belfast are 2 from measles, 6 from whooping-cough, 4 from enteric fever, and 2 from diarrhœa. The 44 deaths in Cork comprise 1 from whooping-cough, 1 from enteric fever, and 1 from diarrhœa.

In the Dublin Registration District the registered births amounted to 183—97 boys and 86 girls; and the registered deaths to 202—100 males and 102 females.

The deaths, which are 12 over the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 30·3 in every 1,000 of the population. Omitting the deaths (numbering 7) of persons admitted into public institutions from localities outside the district, the rate was 29·3 per 1,000. During the forty-seven weeks of the current year the death-rate averaged 25·4, and was 1·7 under the mean rate in the corresponding period of the ten years 1881–1890.

Twenty-six deaths from zymotic diseases were registered, being 2 over the number for the preceding week and also 2 in excess of the average for the forty-seventh week of the last ten years. They comprise 2 from influenza, 4 from whooping-cough, 1 from diphtheria, 8 from enteric fever, 6 from diarrhœa, and 1 from erysipelas.

The number of cases of enteric fever admitted to hospital during the week is 20, being 2 under the number for the preceding week, 5 under that for the week ended November 14, and 18 under that for the week ended November 7. Twenty-eight enteric fever patients were discharged, 3 died, and 159 remained under treatment on Saturday, being 11 under the number in hospital at the close of the preceding week.

The hospital admissions for the week include also 4 cases of measles and 1 case of scarlatina; 11 cases of measles and 6 of scarlatina remained under treatment in hospital on Saturday. No cases of typhus were admitted during the week, nor were there any cases of that disease in hospital at the close of the week.

Deaths from diseases of the respiratory system, which had risen from 43 in the week ended November 14, to 58 in the following week, fell

this week to 55, but this number is 13 over the average for the corresponding week of the last ten years. The 55 deaths comprise 42 from bronchitis and 9 from pneumonia or inflammation of the lungs.

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In the week ending Saturday, December 5, the mortality in twenty-eight large English towns, including London (in which the rate was 21·2), was equal to an average annual death-rate of 22·6 per 1,000 persons living. The average rate for eight principal towns of Scotland was 32·2 per 1,000. In Glasgow the rate was 31·3, and in Edinburgh it was 38·1.

The average annual death-rate in the sixteen principal town districts of Ireland was 34·6 per 1,000 of the population (unrevised) according to the recent Census.

The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 1·7 per 1,000, the rates varying from 0·0 in thirteen of the districts to 3·1 in Belfast—the 224 deaths from all causes registered in that district comprising 1 from scarlatina, 8 from whooping-cough, 2 from enteric fever, and 4 from diarrhœa. There are also among the 224 deaths 26 from phthisis and 106 from diseases of the respiratory system.

In the Dublin Registration District the registered births amounted to 183—97 boys and 86 girls; and the registered deaths to 231—116 males and 115 females.

The deaths, which are 46 over the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 34·7 in every 1,000 of the population. Omitting the deaths (numbering 6) of persons admitted into public institutions from localities outside the district, the rate was 33·8 per 1,000. During the forty-eight weeks of the current year, ending with Saturday, December 5, the death-rate averaged 25·6, and was 1·5 under the mean rate in the corresponding period of the ten years 1881–1890.

The number of deaths from zymotic diseases registered is 22, being equal to the average for the corresponding week of the last ten years, but 4 under the number for the week ended November 28. The 22 deaths comprise 3 from influenza (including 2 cases in which the disease was complicated with bronchitis), 2 from whooping-cough, 7 from enteric fever, 2 from diarrhœa, 2 from dysentery, and 3 from erysipelas.

Twenty-nine cases of enteric fever were admitted to hospital, being 9 over the admissions for the preceding week, 7 over the number for the week ended November 21, and 4 over that for the week ended November 14, but 9 under that for the week ended November 7. Thirty-four enteric fever patients were discharged, 5 died, and 149 remained under treatment on Saturday, being 10 under the number in hospital at the close of the preceding week.

The hospital admissions for the week include, also, 1 case of scarlatina

and 2 cases of typhus, but no cases of measles were received. Nine cases of measles, 6 of scarlatina, and 2 of typhus remained under treatment in hospital on Saturday.

Deaths from diseases of the respiratory system, which had fallen from 58 in the week ended November 21, to 55 in the following week, rose this week to 79, or 36 over the average for the 48th week of the last ten years. The 79 deaths comprise 51 from bronchitis and 20 from pneumonia or inflammation of the lungs.

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#### METEOROLOGY.

*Abstract of Observations made in the City of Dublin, Lat. 53° 20' N.  
Long. 6° 15' W., for the Month of November, 1891.*

|                                                     |   |   |   |                |
|-----------------------------------------------------|---|---|---|----------------|
| Mean Height of Barometer,                           | - | - | - | 29.782 inches  |
| Maximal Height of Barometer (on 5th, at 9 a.m.),    |   |   |   | 30.693 „       |
| Minimal Height of Barometer (on 11th, at 7 30 a.m.) |   |   |   | 28.524 „       |
| Mean Dry-bulb Temperature,                          | - | - | - | 42.8°.         |
| Mean Wet-bulb Temperature,                          | - | - | - | 41.2°.         |
| Mean Dew-point Temperature,                         | - | - | - | 39.4°.         |
| Mean Elastic Force (Tension) of Aqueous Vapour,     | - |   |   | .242 inch.     |
| Mean Humidity, -                                    | - | - | - | 88.2 per cent. |
| Highest Temperature in Shade (on 18th)              | - |   |   | 57.8°.         |
| Lowest Temperature in Shade (on 24th),              | - |   |   | 31.4°.         |
| Lowest Temperature on Grass (Radiation) (on 24th),  |   |   |   | 25.0°.         |
| Mean Amount of Cloud, -                             | - | - | - | 54.7 per cent. |
| Rainfall (on 15 days), -                            | - | - | - | 2.911 inches.  |
| Greatest Daily Rainfall (on 10th), -                | - | - | - | 1.229 inches.  |
| General Directions of Wind,                         | - | - | - | S.W., W.       |

#### *Remarks.*

Opening with a week of quiet, fine, dry anticyclonic weather, this month ultimately proved very cold and changeable. On the 11th a disastrous cyclone crossed England from S.W. to N.E., causing destructive gales from different quarters and downpours of rain in many places. After this date temperature remained low to the end of the month, with one or two passing exceptions, and rain fell frequently, though not as a rule, heavily.

There was an overwhelming preponderance of southwesterly wind during the month, but the sky—at least in Dublin—was often clear, and temperature ruled low.

In Dublin the arithmetical mean temperature (43.4°) was decidedly below the average (44.7°); the mean dry bulb readings at 9 a.m. and 9 p.m. were 42.8°. In the twenty-six years ending with 1890, November was



coldest in 1878 (M. T. =  $38.2^{\circ}$ ), and in 1870 (M. T. =  $42.2^{\circ}$ ), and warmest in 1881 (M. T. =  $50.3^{\circ}$ ). In 1886, the M. T. was as high as  $46.4^{\circ}$ ; in the year 1879 (the "cold year"), it was  $43.9^{\circ}$ ; in 1887, it was as low as  $42.6^{\circ}$ ; in 1888, it was as high as  $47.5^{\circ}$ ; in 1889, it was  $46.4^{\circ}$ ; and in 1890, it was  $45.3^{\circ}$ .

The mean height of the barometer was 29.782 inches, or 0.078 inch below the corrected average value for November—namely, 29.860 inches. The mercury rose to 30.693 inches at 9 a.m. of the 5th, and fell to 28.524 inches at 7 30 a.m. of the 11th. The observed range of atmospheric pressure was, therefore, 2.169 inches—that is, nearly two inches and two-tenths.

The mean temperature deduced from daily readings of the dry bulb thermometer at 9 a.m. and 9 p.m. was  $42.8^{\circ}$ , or  $5.4^{\circ}$  below the value for October, and  $13.6^{\circ}$  below that for September, 1891. The arithmetical mean of the maximal and minimal readings was  $43.4^{\circ}$ , compared with a twenty-five years' average of  $44.7^{\circ}$ . On the 18th the thermometer in the screen rose to  $57.8^{\circ}$ —wind, S.W.; on the 24th the temperature fell to  $31.4^{\circ}$ —wind, W.N.W. The minimum on the grass was  $25.0^{\circ}$  also on the 24th.

The rainfall was 2.911 inches, distributed over 15 days—the rainfall was above, while the rainy days were below, the average. The average rainfall for November in the twenty-five years, 1865–89, inclusive, was 2.452 inches, and the average number of rainy days was 17.0. In 1876 the rainfall in November was large—3.614 inches on 20 days; in 1872, also, 3.414 inches fell on 24 days; in 1887, 3.012 inches fell on 18 days; in 1888, 6.549 inches fell on 26 days; and in 1890, 4.212 inches fell on no less than 27 days. On the other hand, the rainfall in 1889 was only .929 inch on 9 days; in 1870, only 1.218 inches were measured on but 11 days, and in 1879 only 1.251 inches on but 10 days.

High winds were noted on 9 days, and attained the force of a gale on 3 occasions—the 11th, 12th, and 28th. The atmosphere was more or less foggy in Dublin on the 6th, 7th, 13th, 14th, 15th, 23rd, 24th and 25th. Sleet fell on the 26th.

The period ended Saturday, the 7th, proved to be a very uneventful week of quiet, fine, mild, but often dull weather, with easterly winds until Friday, when a shift to the westward took place. During the entire period an anticyclone lay over the British Islands. At first the centre of this system was found over the North Sea to the northeastward of Scotland—at 8 a.m. of Sunday the barometer was as high as 30.73 inches at Aberdeen. After Wednesday, the high pressure system moved southwards, so that the easterly winds died down, giving place to calms and dull weather in Ireland and England, and to westerly winds in Norway and Scotland. On Friday, the westerly current made still greater way southwards, and on Saturday Ireland came well within the

influence of a gentle S.W. wind. Owing to the large amount of cloud, radiation was much interfered with and therefore little or no frost was felt in the British Islands. In France and Germany, on the contrary, the sky was often clear, and sharp frosts prevailed—at 8 a.m. of Friday, the thermometer read  $19^{\circ}$  at Munich and  $25^{\circ}$  in Paris. In Dublin the mean height of the barometer was 30·518 inches, pressure decreasing from 30·693 inches at 9 a.m. of Thursday (wind, E.) to 30·258 inches at 9 p.m. of Saturday (wind, calm). The corrected mean temperature was  $47\cdot7^{\circ}$ , or  $2\cdot3^{\circ}$  above that of the previous week. The mean dry bulb temperature at 9 a.m. and 9 p.m. was  $47\cdot2^{\circ}$ . On Sunday the thermometer rose to  $53\cdot8^{\circ}$  in the screen, on Saturday it fell to  $41\cdot2^{\circ}$ . There was no rain during the week. The prevailing wind was easterly.

No greater contrast can be imagined than that which was presented by the weather of the week ended Saturday, the 14th, to that of the previous week. Then the barometer was uniformly and continuously very high (the mean pressure being 30·518 inches), temperature was relatively high and steady, while the weather was quiet and rainless. Now, atmospherical pressure was most unstable, the mean height of the barometer was 1·817 inches below that of the former week, temperature was low and unsteady, violent gales alternated with calm and fog, and rain fell in vast quantities all over the British Islands. Gradients for S.W. winds were already established at the beginning of the week, and squalls and rain were reported from time to time. On Tuesday night a very deep depression approached the British Islands from S.W., rapidly growing deeper as it advanced. In its centre the barometer fell to 28·30 inches or lower, with the result that one of the most disastrous storms of modern times swept across England. In Dublin the force of the wind was not great, but rain fell in torrents. On Thursday evening another equally deep depression arrived off the S.W. of Ireland, whence it passed off in a northerly direction. It was accompanied by strong gales and heavy rain in Ireland. Saturday was calm, damp, and foggy, and a most inclement week drew to a close with a slowly rising barometer. In Dublin the mean pressure was 29·201 inches, the barometer ranging between 29·930 inches at 9 a.m. of Sunday (wind S.S.W.) and 28·524 inches at 7.30 a.m. of Wednesday (wind N.N.W.). The mean temperature was  $43\cdot6^{\circ}$ , the mean dry bulb temperature at 9 a.m. and 9 p.m. was  $42\cdot7^{\circ}$ . The thermometer in the screen ranged between  $35\cdot9^{\circ}$  on Saturday and  $50\cdot9^{\circ}$  on Thursday. Rain fell on every day, the total measurement being 2·098 inches, of which 1·229 inches were registered on Tuesday.

Dull, showery, and unsettled weather prevailed at the beginning of the week ended Saturday, the 21st, except in parts of Scotland and in the north-west of Ireland, where the weather was fine and the sky clear. These conditions were brought about by the advance up the English

Channel of a complex atmospherical depression during the night of Saturday, the 14th, and in the course of Sunday, the 15th. Unfortunately, this state of things led to the complete obscuration by clouds of the total eclipse of the moon, which took place on the night of Sunday; in the Northwest of Ireland, however, the eclipse was seen in a clear sky. On and after Tuesday the lowest barometrical readings were again found in the Northwest, so that the wind became Southwesterly and temperature rose fast, with cloudy, showery weather. Gradients were not very steep, and so no gales were felt except at a few exposed coast stations. On Wednesday temperature rose to  $57.8^{\circ}$  in Dublin and to  $57^{\circ}$  in London and at Cambridge. On Friday the low pressure area passed on to Scandinavia, and the wind drew into N.W. or N. in the British Isles, with a reduction of temperature, which became still more decided on Saturday. In Dublin the mean height of the barometer was  $29.720$  inches—pressure ranging between  $29.352$  inches at 9 a.m. of Sunday (wind, N.W. to N.) and  $29.951$  inches at 9 p.m. of Saturday (wind, N.W.). The mean temperature was  $44.5^{\circ}$ ; the mean of the dry bulb readings at 9 a.m. and 9 p.m. was  $44.1^{\circ}$ . The thermometers in the screen rose to  $57.8^{\circ}$  on Wednesday (the highest reading recorded since October 13), and fell to  $36.4^{\circ}$  on Saturday. The rainfall was  $.393$  inch on four days—of this quantity,  $.211$  inch fell on Sunday, which was chiefly dull and wet on the east coast of Ireland.

During the week ended Saturday, the 28th, quiet, cold, but changeable weather held until Saturday, when a moderate southerly gale and heavy rain occurred in the morning. Over Western Europe in general the distribution of atmospherical pressure at first was for the most part irregular, and without steep gradients. As the amount of cloud was slight, temperature became and continued low, sharp night frosts being reported from most stations. On Wednesday a depression was found off the N.W. of Scotland, and cold showers of rain, sleet, and hail fell over Ireland, Wales, and parts of England and Scotland. The rainfall was not heavy except at Holyhead, where  $.98$  inch fell in 48 hours ending 8 a.m. of Thursday. In the wake of the depression just mentioned several shallow secondary systems passed across the British Islands. On Friday afternoon the only serious depression of the week approached Ireland from the Atlantic. It caused heavy rain and a southerly gale on Saturday morning, but the wind soon veered towards W. with a clearing sky. In front of this disturbance a considerable, but transitory, rise of temperature took place. In Dublin the mean height of the barometer was  $29.722$  inches, pressure ranging between  $29.920$  inches at 9 a.m. of Sunday (wind, N.W.) and  $29.249$  inches at 9 a.m. of Saturday (wind, S.S.E.). The mean temperature was  $38.7^{\circ}$ . The mean dry bulb temperature at 9 a.m. and 9 p.m. was  $37.7^{\circ}$ . The thermometers in the screen rose to  $51.8^{\circ}$  on Saturday, having fallen to  $31.4^{\circ}$  on Tuesday. Rain fell on

three days to the total amount of  $\cdot 359$  inch—of this quantity  $\cdot 280$  inch was referred to Friday.

Sunday, the 29th, was a fair, bright, calm day. Monday, the 30th, was changeable.

The rainfall in Dublin during the eleven months ending November 30th has amounted to  $24\cdot 521$  inches on 163 days, compared with  $15\cdot 378$  inches on 141 days during the same period in 1887,  $25\cdot 768$  inches on 173 days in 1888,  $25\cdot 718$  inches on 178 days in 1889,  $25\cdot 706$  inches on 189 days in 1890, and a 25 years' average of  $25\cdot 292$  inches on  $177\cdot 4$  days.

At Knockdolian, Greystones, Co. Wicklow, the rainfall in November, 1891, was no less than  $5\cdot 525$  inches, distributed over 15 days. Of this quantity  $2\cdot 330$  inches fell on the 10th, and  $\cdot 850$  of an inch on the 15th.

From January 1st, 1891, up to November 30th, rain fell at Knockdolian, Greystones, on 155 days, and to the total amount of  $30\cdot 269$  inches.

## PERISCOPE.

### LEPROSY IN NEW SOUTH WALES.

FROM the *Australasian Medical Gazette* we learn that Mr. Sager, Secretary to the N. S. Wales Board of Health, has reported on leprosy in that colony. Twenty-five cases were under the control of the Board from 1883 to 30th April, 1891. Of these 16 were Chinese, 1 was a Javanese, 1 was a West Indian negro, and 7 were Europeans—*i.e.*, of European parentage, but born in New South Wales—all but one males. Two other cases were reported—one of German birth, immigrant, at the age of three, and one native-born, of European blood. In all the cases the disease was developed in the colony.

### KEEPING DOWN THE DEATH-RATE.

THE New York correspondent of the *Journal of the American Medical Association*, in its issue of Aug. 22, states that an impression prevails in New York that the so-called "private" hospitals of the city are in the habit of improving their mortality statistics at the expense of Bellevue Hospital, which is maintained altogether with public money. An instance was reported in the lay press last spring. A negro was found moribund in the street in the immediate neighbourhood of a certain hospital, the ambulance of which picked him up, and carried him a mile and a half to Bellevue, to die there. The warden of Bellevue asserted that this was only one of many cases of inhumanity on the part of private hospitals for the purpose of keeping down their death-rates. "We are powerless," continued the warden, "because most of the hospitals are classed as



private, although they receive money from the city. These hospitals unload everything at Bellevue that looks like death, and the death-rate here makes it look like a slaughter-house. After dark, every night, there is a string of ambulances from all the hospitals in town passing through the gates of Bellevue, carrying dying patients. These have been treated at the hospitals until there was no chance left of curing the diseases from which they were suffering, and then the order was given to take them to the dead-house—meaning Bellevue. The doctors at the other hospitals laugh at us. Bellevue is a charity hospital belonging to the city, and we have to take all patients who are unable to pay their board." It is fair, however, to add that a committee of the grand jury, reporting on the city ambulance service, denies the charge; such transfers being made, it maintains, only when they ought to be made.

#### BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION.

THE first meeting of the Session, 1891-92, was held at the rooms of the Medical Society, Chandos-street, London, on Friday, the 27th of November, when Mr. Lennox Browne, the newly-elected President, delivered an Address, taking for his subject "A quarter of a century's Retrospect of Laryngology." He first referred to the fact that the opportunities in the shape of special hospitals, and special departments at general hospitals for the treatment of diseases of the throat, as well as the number of patients applying for relief, had multiplied tenfold since the establishment of the Throat Hospital, Golden-square, in 1865, by Dr. Morell Mackenzie, and that that and other special institutions—now considered by some unnecessary—had been the direct means of teaching all those general surgeons of the Metropolis who are attached to special departments, or have since established other special hospitals, and that this is equally true of the provinces and colonies. He also claimed that all the best original work in this as in other specialties had come, not from the general surgeon who flirted with a specialty, but with the well-educated specialist who devoted his life to it. As both a warning and an encouragement, and not for the sake of amusement, the President recalled the ridicule and incredulity with which the laryngoscopic observations of Garcia were received, and the insolent assertions that a special hospital for diseases of the throat to be diagnosticated and treated by the aid of the laryngeal mirror was the acme of quackery. Not indeed that the Throat Hospital was more abused than was the now accepted Royal Ophthalmic Hospital of Moorfields, founded in 1805, which noble institution was described by the medical journal of those days as a "shop for the reception of gulls" and for the "cutting out of eyes," and yet technically an Eye Hospital and a Throat Hospital were exactly on a similar basis of justification. And what had been said of laryngology twenty-five years ago was now being said of rhinology. To justify the position of this offshoot of the science,

Mr. Lennox Browne devoted his Address. He deduced striking statistics from the reports of the Throat Hospital in Golden-square, and the Central London Throat and Ear Hospital in Gray's Inn-road, which between them treated over 13,000 new patients yearly, to prove the statement of Bosworth, of New York, that the majority of diseases of the larynx, trachea, and bronchi, commence in the nose, which may well be termed "the front door" of the respiratory passages. Careful statistics taken at the Central London Throat and Ear Hospital had proved that "spurs" and deviations of the septum, if not the cause—as Bosworth asserted—of hypertrophic rhinitis, and of many other intranasal causes of obstruction, are, at least, associated in no less than 87 per cent. of the cases that come under notice. The President also alluded at some length to the far-extending ill effects of mouth-breathing due to adenoids, as instanced by impairment of hearing, sight, respiration, and speech, and of the general mental development of the young. Amongst other comparatively unrecognised consequences of this condition were laryngismus stridulus and laryngeal growths in young children, cases illustrative of which he had himself had the honour to be the first to report at that Association. Passing onwards, the lecturer referred to the enormous advantage in the detection and treatment of tuberculosis generally, as learnt through the lessons of the laryngoscope; to the value of the microscope in its more perfect development of recent times, which he attributed to the powerful exhortation of Sir James Paget "to examine each morbid growth or product directly after its removal from the living body, while it may be deemed still alive;" to bacteriology, the younger sister of histology; and, lastly, to the high importance of searching for constitutional bases for all special and apparently local maladies, and for correction by education of disorders of the voice through the intelligent application of physiology. The President concluded his Address by quoting an eloquent peroration of Sir James Paget, to the effect that we must not be content with present utility, for that our utility can be increased only by every increase of our real knowledge.

#### AN ANTHRAX REMEDY.

R. CHLORAL HYD.,  $\mathfrak{z}\text{i}$ ; glycerini; aquæ,  $\text{āā} \mathfrak{z}\text{ivss}$ ; ft. sol. Gauze soaked in this solution is laid on the anthrax. This treatment is said to render the use of the knife unnecessary.—*The Therapist*, No. 7.

#### ARTICHOKE.

M. LE DR. PATHIER draws the attention of the medical profession, cattle breeders and agriculturists, to the fact that the milk of cows who eat artichoke leaves causes vomiting and purging. According to the author, infants are especially liable to be affected injuriously with such milk.—*Les Nouveaux Remèdes*, Nov. 13, 1891.

## HOW ARE THE MIGHTY FALLEN !

IN Munich, owing to the many deaths directly traceable to Koch's consumption "cure," its sale is absolutely prohibited. Druggists are forbidden to sell it even to medical men. [We wonder what use the stock on hand is being applied to, or has the high-priced nostrum departed by the closet sewage-pipe from the cabinets of its admirers.]

## CLEVER FALSIFICATIONS.

OUR contemporary, *Répertoire de Pharmacie*, reports that old almonds and old nuts are by dishonest traders submitted to the action of sulphurous acid vapours, which remove their blackish-brown colour and give them the well-known light-brown appearance so long considered indicative of freshness.

## STRYCHNIN AS AN ANTIDOTE TO OPIUM.

M. C. T. DERCUM reports (*Pharm. Zeitung*) the recovery of a patient who had taken 30 grammes of the extract of opium, by hypodermic injections of 0.00375 of a gramme dose of strychnin every hour for seven doses. Prior to using the strychnin, all the usual antidotes and restorative methods were unsuccessfully tried.—*Répertoire de Pharmacie*, No. 8, 1891.

## A NOVELIST'S ANATOMY.

THAT brilliant writer, Rudyard Kipling, describes one of his heroes as being permanently blinded by a sabre cut on the forehead, which *injured the optic nerve*.

## QUININE SYNTHESIS.

AMONGST the most brilliant of the recent triumphs of chemistry is the synthesis of quinine by MM. Grimaux and Arnaud. They operated on "cuprein," and by a series of well-known substitutions they produce a "methyl-cuprein" which they find to be chemically identical with quinine, and it is to possess the same physiological properties.—*Les Nouveaux Remèdes*, No. 9.

## ELECTRICAL TREATMENT OF UTERINE TUMOURS.

DR. G. BETTON MASSEY, of Philadelphia, read a paper before the American Medical Association, at the last annual meeting, in which he gives the result of Apostoli's treatment in 46 consecutive cases of his own. He excludes from tabulation severe cases; two because the tumours were polypoid, and five because they were under treatment for too short a time. Of the remaining 39, 12.8 per cent. resulted in complete cure and disappearance of the tumour; 79.4 per cent. in symptomatic cure with or without reduction in size; 5.3 per cent. [two] were unaffected;

and 2·5 per cent. [one] were made worse. In other words, about 92 per cent. were successes and 8 per cent. failures. The case which was made worse by the treatment died subsequently from septicæmia during attempts to remove the tumour piecemeal; and the anterior wall of the uterus was found to be ruptured. It was a case of large intra-uterine fibro-cyst, treated before it had been pointed out by Apostoli that such cases would be injured by electrical treatment.

#### MICROCIDINE.

UNDER this name M. le Dr. Berlioz introduces to the Academy of Medicine of Paris a new antiseptic substance produced by fusing  $\beta$  naphthol and caustic soda. It is cheap, non-toxic, more powerful than phenol, soluble in three times its weight in water, and when well diluted forms a colourless solution.—*Les Nouveaux Remèdes*, No. 9.

#### SALOL.

IN typhoid fever the best results have been obtained by the administration of three-grain doses of salol every two hours. Tympanites disappears, and diarrhœa, no matter how severe at the commencement, gradually improved; no further special treatment. Temperature seldom rose after the first day of salol administration, and after the first week it fell steadily. The average duration of cases treated in this way was 17 days.—*The Therapist*, No. 7.

#### MASSAGE.

DR. AGOSTINI (*Archivio di Ortopedia*) reports 417 cases of accident from massage during the past year. They include 41 tibio-tarsal, 12 endo-carpal, 6 elbow, and 3 knee dislocations.—*The Dietetic Gazette*, July, 1891.

#### LYSOL.

ONE of the many new antiseptics is stated by Gerlich to be superior to all others. 1. It is an energetic germicide; 2. It is almost odourless; 3. It is soluble in all proportions in water; 4. It is non-poisonous. He gives the following prescription:—Lysol, 2·5 grammes; water, 50 grammes; alcohol, 25 grammes; glycerine, 25 grammes—as a gargle for foul breath or diseased conditions of the mouth and throat.—*Les Nouveaux Remèdes*, No. 14.

#### RESORCIN.

H. MENCHE (*Cntrlbl. f. klin. med.* No. 21) strongly recommends teaspoonful doses of a solution of resorcin varying from 1 to 5 per cent. He declares that it is indicated in all cases of gastritis, dyspepsia, acute and chronic



cancer, the vomiting of pregnancy, and in sea-sickness. It is, however, contra-indicated in cases of gastric ulcer. The following are his formulæ:—Hydrochloric acid, 2 grammes; resorcin bisublim., 2 grammes; syrup of oranges, 20 grammes; water, 178 grammes. A large spoonful every two hours. Condurango decoction, 180 grammes; rhubarb tincture, 5 grammes; resorcin bisublimite, 2 grammes; syrup of oranges, 20 grammes. 3ss. every two hours.—*Les Nouveaux Remèdes*, No. 16.

#### BORIC ACID.

DR. KEEGAN (*Provincial Medical Journal*) recommends boric acid in cases of typhoid fever with marked tympany. With doses of eight grains, frequently repeated during the day, he obtained good results in fifty-two cases.

#### BITES OF POISONOUS SERPENTS.

M. LE ST. KARLINSKI, from a large experience of the bites of poisonous snakes in Bosnia, declares that a 1 per cent. solution of chromic acid injected hypodermically successfully acts as an antidote.—*Le Mercredi Médical*, No. 31.

#### ATROPIN AS A HÆMOSTATIC.

DR. BIERWIERTH (*Le Mercredi Médical*, No. 31) reports the successful treatment of almost all forms of bleeding by the hypodermic injection of small doses of atropin. He considers it to be superior to all other remedies as a hæmostatic and suitable for all class of cases.

#### SPONTANEOUS DORSAL LUXATION OF THE HIP FROM GONORRHEEA.

M. KAREWSKI, at a meeting of the Surgical Society of Berlin, on the 13th of July, exhibited a case of spontaneous luxation of the femur on the dorsum ilii due to gonorrhœal synovitis. The patient was a married woman of forty-one years of age.—*Le Mercredi Médical*, No. 31.

#### CACTUS GRANDIFLORUS.

DR. JOHN AULD warmly recommends cactus grandiflorus as a cardiac tonic superior to digitalis and free from its cumulative dangers. He considers it suitable both in cases of venous irritability and organic lesions of the heart. The preparations he uses are the tincture and the fluid extract, which may be given in doses of from five to fifteen minims thrice daily. The following are his formulæ:—Liq. cacti grand., 10 grammes; tinct. of nux vomica, 10 grammes; liquor pancreatici, 100 grammes. Mix. A teaspoonful after each of the two principal meals. Liq. cactus grand., 10 grammes; liq. arsenicalis (Fowler), 30 drops; tincture of gentian, 100 grammes. Mix. One teaspoonful in water every four hours.—*Les Nouveaux Remèdes*, No. 5.

## NEW PREPARATIONS AND SCIENTIFIC INVENTIONS.

### *Granular Effervescent Preparations.*

Mr. Alfred Bishop, the well-known manufacturing chemist, of 17 Speck's Fields, Mile End New Town, London, has recently introduced to the notice of the profession a very elegant series of granular effervescent preparations, which cannot fail to supply a want in practical therapeutics.

Five of these preparations have been submitted to our notice. One contains 5 grains of phenacetin in each drachm; another 5 grains of antifebrin (acetanilide); a third, 2 grains of exalgin; and a fourth, 5 grains of antipyrin (phenazone) with one grain of caffeine.

The fifth is quite novel to us. It is the granular effervescent carbonate of iron, prepared according to Blaud's formula, 2 grains of the salt being present in each drachm. This last cannot but prove a very popular and pleasant way of giving a ferrous salt in effervescence.

### *Glycerine Jujubes.*

Mr. Stephen Wand, of Leicester, has sent us a box of glycerine jujubes, which seem to be decidedly superior to any as yet in the market. They are made of glycerine and gelatin, and are warranted to contain 50 per cent of pure glycerine. They are therefore palatable and most emollient and sedative. At this verdict we have arrived from practical experience.

### *Soluble Pearl-coated Pills.*

Mr. Wand, of Leicester, has also forwarded a box of samples of soluble pearl-coated pills, selected at random from a list of nearly 1,300 formulæ. The pills are well made and enveloped in a pearl-coating, which on experiment is found to crack and expose its contents on immersion for half an hour in water at blood heat. The disintegration is hastened by the addition of a small quantity of dilute hydrochloric acid.

These experiments would go to show that the pills are likely to break up and become dissolved in the stomach, and that too without any long delay. The pills are tastily dispensed in bottles with cork-stoppers tipped with polished wood.

### *Dermatol.*

Messrs. Burroughs, Wellcome & Co. have sent us a specimen of dermatol, which is put forward as a substitute for iodoform by the firm of Meister, Lucius & Brünig, in Germany. Chemically it is said to be

a basic gallate of bismuth, and the choice of name does not seem a very appropriate one. It is an odourless, light yellow powder, stable towards air and light, and insoluble in the ordinary solvents.

Dr. Glaeser, of Breslau, reports favourably of it as an application to superficial wounds. It is also used in various skin affections, diluted with an inert powder such as starch or talc, or as an ointment (10 per cent.) with vaselin or lanolin. On account of its insolubility its antibacterial action is limited to the part where it comes into direct contact with the pus microbes, resembling in this respect iodoform. In addition to its direct antiseptic action it is claimed for dermatol that it has a desiccating influence, so that the development of the bacteria is inhibited by the drying up of their pabulum. The astringent action of the preparation is also said to influence the process of healing, whilst on the other hand it causes no irritation and is not absorbed. This preparation is further said to be valuable when administered internally in affections of the stomach and intestines, and it is stated that, as it is non-poisonous, doses amounting to 2 grams daily are well borne.

#### *The Combined Spatula, Pen, and Pencil.*

Messrs. Burroughs, Wellcome & Co. have sent us some specimens of an invention designed for the special use of medical men who so often require to have at hand a pencil, a pen, and a spatula.

The spatula is made of white metal, nickel-plated, and can therefore be used as a tongue-depressor, fruit-knife, or paper-knife.

The firm supply this ingenious combination at the very low price of sixpence each, post free.

On the blade and handle some of the preparations for which the firm are famous are cleverly advertised.

#### *Benzosol (i.e., benzoyl-guaiacol).*

This substance is a granular white powder, with a faint odour, and a somewhat aromatic taste. The drug has been employed with success in the In-patient department of the Marienhilf Hospital, Aix-la-Chapelle, by Dr. Schervier. The Benzosol was tried in 10 cases of incipient phthisis, and decided improvement took place in each case. Benzosol is regarded as an agreeable and harmless substitute for creasote, beneficially influencing the general nutrition, and consequently increasing the resistance of the patient to the disease. Benzosol is decomposed in the digestive tract into guaiacol and benzoic acid, and the former can be detected in the urine and saliva within half an hour after ingestion. The drug is not soluble in water and is decomposed by hot water, so that it must be given in powder. Messrs. Burroughs, Wellcome & Co. are the agents.

*Iodopyrin.*

This product is a chemical compound of iodine with antipyrin, in which an atom of hydrogen is replaced by iodine, thus  $C_{11}H_{11}IN_2O$ . It is only slightly soluble in cold water and alcohol, but readily soluble in hot. It is perfectly tasteless and without odour. This product has been tested in the clinic of Professor R. R. v. Jaksch, and is reported upon by Dr. Egmont Munzer in the pages of the "Prager med. Wochenschrift," 1891, No. 4 and 5. The product was first prepared by Dittmar (*vide* "Berichte der chemische Ges. zu Berlin," 11, 1885).

Dr. Munzer says:—"I have studied the action of this substance principally on two types of fever—(1) on typhus abdominalis, and (2) on pulmonary tuberculosis. Five cases of typhus are recorded, and in each instance the temperature was rapidly lowered to normal. In the cases of tuberculosis pulmonum the administration of the drug caused profuse sweating, and in every way the antipyretic action was all that could be desired." When iodopyrin is taken into the stomach it is decomposed into iodine and antipyrin.

## A YOUNG ANATOMIST.

WHEN he was but fifteen years of age Albinus was considered by Boerhaave one of the ablest anatomists in Europe; and at twelve years of age Littre was demonstrating anatomy; but what must be said of Master Albert Finch, of Rockport, Indiana, who, though but five years old, is an anatomist.

## DENTITION.

THE fever of dentition is relieved by hot or cold bathing, or by drop doses of aconite, which will probably tide over the period of irritation which comes with dentition, and will prevent convulsions. If convulsions are imminent, give small doses of bromides. Hollopeter.—*The Times and Register*, No. 672.

## ERRATUM.

Vol. XCII., No. 240, Third Series, page 501.—Top line, for "phytogenous," read "hyphogenous."



"A true scholar never ceases to learn."—Hogarth.



Medical Practitioners are invited to write to the  
**LIQUOR CARNIS COMPANY, Limited, 50 Holborn  
Viaduct, London, E.C.,** for a free supply of Caffyn's  
Liquor Carnis and other Raw Beef-Juice Products.

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"Its convenient portable form will probably render it popular amongst travellers, with whom palatable and compact commodities of this description are always largely in quest. Dyspeptic persons, too, who have been recommended to eschew tea, would do well to give Caffyn's Malto-Carnis a trial, and in other and similar diseased conditions the preparation will doubtless prove useful."—*The Medical Press.*

### Braithwaite's Retrospect, January, 1891.

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From "RETROSPECT OF PRACTICAL MEDICINE AND SURGERY,"  
July, 1877.

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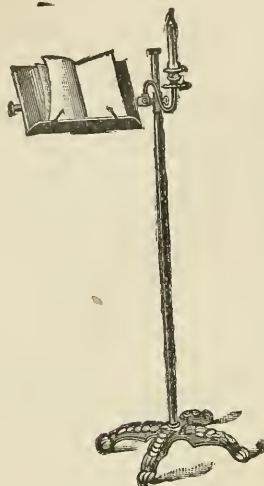
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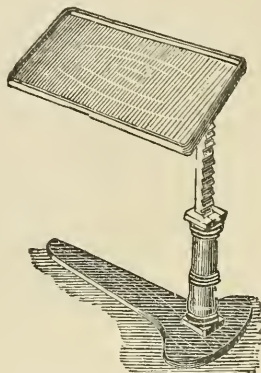
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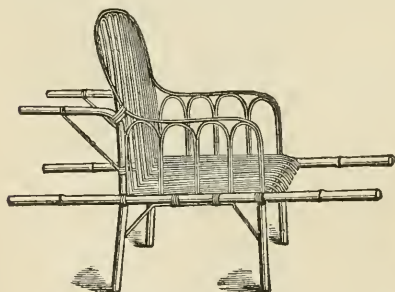
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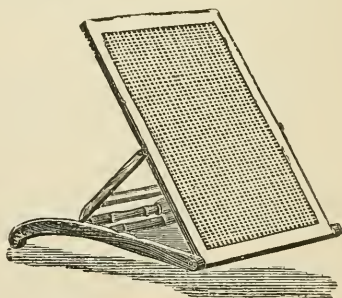
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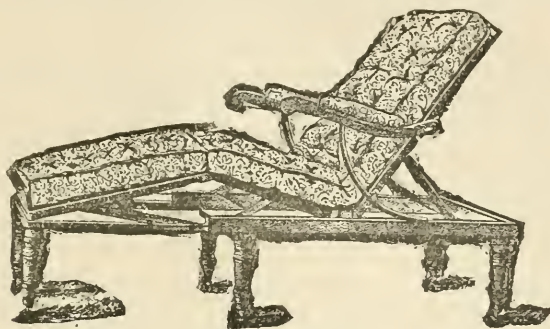
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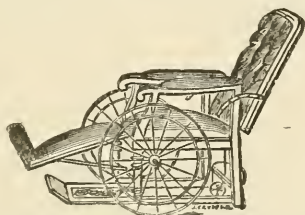
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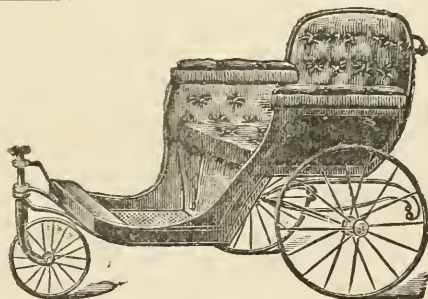
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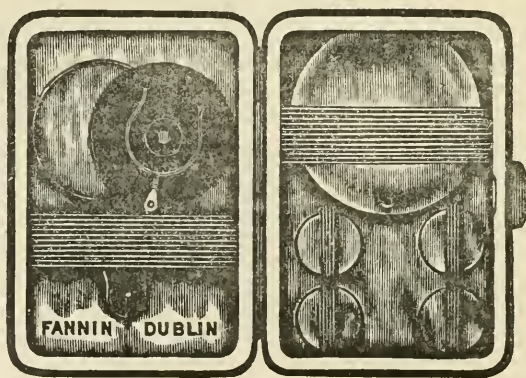
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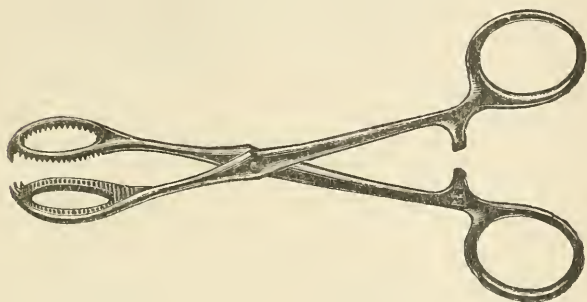
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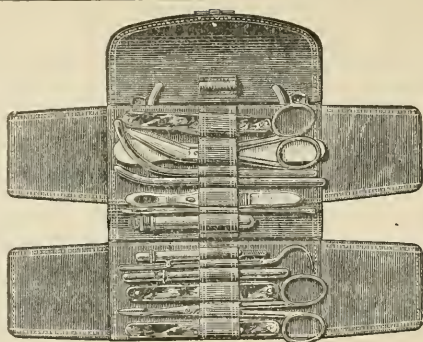
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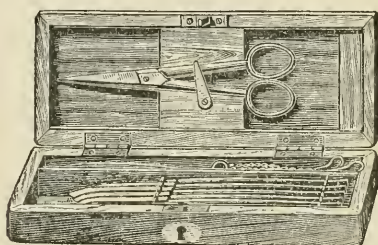
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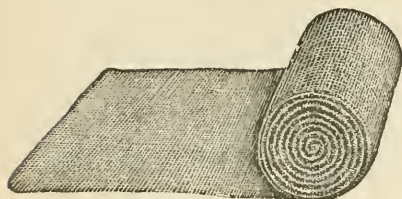
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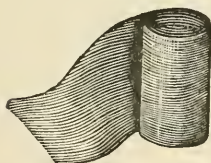
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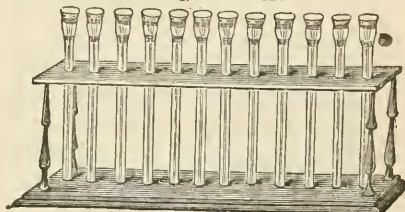
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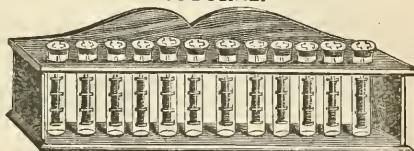
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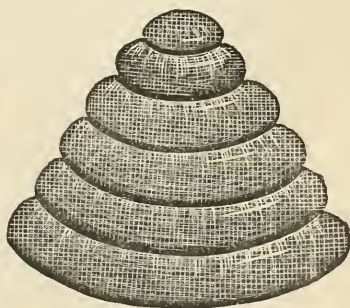
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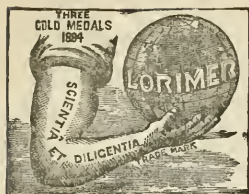
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(ARMBRECHT).

For Fatigue of Mind and Body.

A WONDERFUL RESTORATIVE OF VOCAL, MENTAL, & PHYSICAL POWERS.

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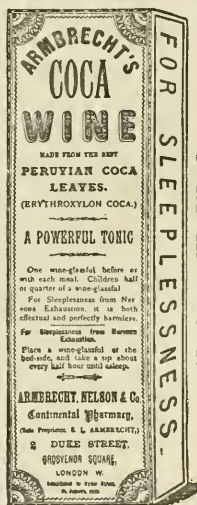
Fresh Huanuco Coca Leaves.

Pure Madeira Wine, q.s.

Each Wineglassful contains the Extractive Properties of  
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**FRESH GREEN COCA LEAVES.**

FOR FATIGUE OF



MIND AND BODY.

*P.S.—This is the only Wine which contains the  
Extractive Properties of the GREEN and FRESH  
LEAVES, and is therefore much more efficacious  
than those wines made from the dry imported leaves.*

Assuages Thirst and Hunger, and promotes Digestion. For Sleeplessness it is superior to Opium, Bromides, and Chloral, as there is positively no reaction.

**RETAIL.—Price 4s. 6d. per bottle; by post, 5s.**

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This delicious and highly nutritive Food was awarded the **GOLD MEDAL** at the International Health Exhibition, London, and has since received a High Award at every Exhibition at which it has been shown.

**BENGER'S FOOD** is well known to leading medical men, and is recommended by them.

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*The following extracts from the Medical Journals sufficiently indicate its high character, and the estimation in which it is held alike by the Medical Profession and by the Public:—*

The **LANCET** of March 25th, 1882, says:—

“Would be assimilated with great ease.”

The **BRITISH MEDICAL JOURNAL**, Aug. 25th, 1883, says:—

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The **ILLUSTRATED MEDICAL NEWS**, Dec. 22, 1888, says:—

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From an Eminent Surgeon.

“After a lengthened experience of Foods, both at home and in India, I consider ‘Benger's Food’ incomparably superior to any I have ever prescribed.”

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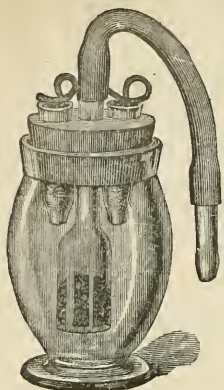
“This particular food is the only one I have been able to take constantly and with advantage. I have prescribed it for others with the best results.”

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If one part of any soap in the market, opaque or otherwise, be dissolved in four parts of boiling water, an abundance of free alkali will always be present; and all statements to the contrary are not correct.

### SCIENTIFIC PROOF (Showing Alkali):—

1. This aqueous solution of soap will turn red litmus paper blue.
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**Taste.**—If the tongue be rubbed on a piece of ordinary toilet soap, the alkali present will "bite."

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**Smell.**—(a.) Soaps containing strong, powerful scents are usually made with bad fats, the powerful perfumes being used to cover the rancifying fats.

(b.) A freshly cut slice of ordinary transparent soap smells of methylated spirit.

(c.) The same held over a lighted match gives off an odour of burnt sugar.

(d.) Boiled with Fehling's Solution, it gives a red precipitate, showing sugar.

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The Extra Cream in "VINOLIA" SOAP is the only possible antidote tending to guard the integument during hydrolysis, and to prevent any injurious action on delicate skins.

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The materials employed to superfat "VINOLIA" SOAP are entirely different and distinct from the mineral oils and saponifiable and unsaponifiable animal fats incorporated with the superfatted imitations of "VINOLIA" SOAP that have been foisted on the market since the introduction of that popular article.

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"VINOLIA" CREAM, 1s. 9d.

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